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Accountability in Environmental Assessment Law, Policy and Practice: Changing Paradigms, Changing Purposes in the European Union, 1985-2010

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Abstract

Twenty five years since the introduction of the European Union (EU) environmental impact assessment (EIA) Directive in 1985 this thesis reflects on how environmental assessment (EA) legislation in the EU has evolved, how it has responded to changing policy contexts (paradigms) and whether the experience of implementing EIA and strategic environmental assessment (SEA) in the EU provides useful insights into the nature and role of environmental assessment (EA) instruments. Paralleling this development of EU legislation has been the continuing and slowly maturing debates around EA theory. Surprisingly - in the context of legal mandates for EA - there is little reference in the EA literature explicitly to the literature on accountability and the role EA may play in this increasingly important aspect of governance.

This thesis examines how the legislation has changed over the 25 year period in response to the changing policy context, and – through drawing on empirical action and policy-oriented research reported in the selected papers – seeks to answer the core research question "*To what extent have EA processes, over the course of their evolution in the EU, provided a platform for enhancing accountability and sustainability?*". The thesis examines EA implementation principally from an environmentalist perspective and particularly the way in which NGOs and other advocates for the environment in the UK and EU have used the EA legislation as a lever for increasing democratic, corporate and professional accountability of proponents and decision-makers alike.

Accountability is implicit as a theme underlying the selected papers, but it is the collecting together and synthesis that provides a new lens through which to view EA. The thesis seeks to fill a significant policy and practice gap between the theoretical discussion in the EA community – the role and purpose of EA – and the practical and legal discussions around implementation. From this historical analysis it is clear that EA has had an important role to play – at the *legislative* level in providing the requirements for accountability, and at the *implementation* level as the lever that can be used to hold individuals, organisations and authorities to account for their actions. The relationship with the shift to sustainability is shown to be a close one, since sustainable development demands greater public involvement in decision-making and greater accountability of executive decisions to the public. The lessons from the body of work presented here allow the development of a nascent policy-oriented theory and research agenda regarding EA's role in accountability, which provides a framework for a distinctive new area of EA research and policy analysis. Moreover, an accountability perspective on EA could help re-frame EA for policy makers from being purely an informational and procedural instrument to one which promotes better accountability and sustainability simultaneously.

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Glossary of key terms

Aarhus	Refers to the UNECE Aarhus Convention on Access to Information, Public Participation and Access to Justice in Environmental Matters (1998) signed at Aarhus, Denmark.
Accountability	The holding to account or seeking of an authority or body to take responsibility for their actions.
AoS	Appraisal of Sustainability - a form of sustainability appraisal undertaken for national policy statements.
CEC	Commission of the European Communities
CPRE	Campaign to Protect Rural England (formerly Council for the Protection of Rural England)
Constructionism	Philosophical view in social science that all reality is constructed by people (cf. positivism)
Critical social science	Social science (particularly sociology) that draws on critical theory - a social theory aimed at critiquing and changing society as a whole, rather than seeking only to understand or explain it.
Deliberative	Involved in or characterized by deliberation and discussion. In assessment terms a deliberative approach focuses on engagement and participation of the public and stakeholders to ensure a wide range of types of knowledge and values are able to have an input to the assessment process.
De minimis	In general, meaning lacking significance or importance; in other words the matter is of no real consequence or things are unworthy of the law's attention.
Discourse analysis	A general term for a number of approaches to analyzing communicative events (written, spoken, signed etc), but typically a qualitative method used by social constructionists.
EA	Environmental assessment – a generic term used to cover EIA and SEA, although in the early years of implementing the EIA Directive was used in the UK to refer to EIA.
EC	European Communities
ECJ	European Court of Justice
Ecological modernisation	A school of thought that relies essentially upon on a decoupling of economic growth from environmental degradation, based on human technological innovation being central to the mitigation of environmental problems.
EEC	European Economic Community
EIA	Environmental impact assessment – a public process through which the likely significant effects of a project on the environment are identified and assessed at the earliest opportunity and taken into account in the decision-making process.
EIS	Environmental impact statement – the document produced as part of the EIA process.
EPI	Environmental policy integration
Espoo	Refers to the UNECE Espoo Convention on Environmental Impact Assessment in a Transboundary Context (1991), signed at Espoo, Finland.

ER	Environmental report – the document produced as part of the SEA process.
EU	European Union
Governance	Governance in its widest sense refers to how any organisation, including a nation, is run. It includes processes, systems, norms, rules and responsibilities. It is more than government, recognising that industry, markets, civil society, citizens and other actors have important roles to play in how decisions are made.
Legitimacy	In governance terms, legitimacy refers to actions that are deemed to be desirable, proper or appropriate.
NGOs	Non-governmental organisations
NPS	National policy statement
Positivist	A positivist philosophical perspective is one that considers the scientific method to be the best approach to uncovering the processes by which both physical and human events occur, and that the only authentic knowledge is that which is based on sense, experience and positive verification (cf. constructionism).
Pragmatism	Philosophically, pragmatism considers that truth is neither accessible only via rational, positivist logic nor is it solely constructed by the human mind (as social constructivists would argue), but some combination of observable facts and human construction provides a practical approach to uncovering the truth.
RSPB	Royal Society for the Protection of Birds
Rationalist	Often used synonymously with positivist – someone who emphasises observable facts, and reason or logic, as the source of knowledge or justification. In assessment terms a rationalist perspective is one that assumes that providing information about the environment to the decision-maker, by virtue of that decision-maker being made more aware of the environmental impacts, will result in better decisions from an environmental point of view.
SA	Sustainability assessment (or as known in England, sustainability appraisal) – is similar to SEA except that rather than considering only environmental effects (however broadly defined) SA explicitly considers environmental, economic and social effects, i.e. the traditional three pillars of sustainable development.
SEA	Strategic environmental assessment – a public process for the evaluation of policies, plans and programmes and their alternatives for their likely significant environmental effects, prior to a decision to adopt or approve such an action so that the information can be taken into account.
SEA Protocol	Protocol on SEA attached to the UNECE Espoo Convention.
Social constructivism	Social construct*ivism* **i**s a sociological theory of knowledge that applies general philosophical constructionism into social settings; essentially all knowledge is seen as constructed knowledge (cf. construct*ionism* where reality is socially constructed).
UNECE	United Nations Economic Commission for Europe.

1. Approach and structure of the thesis

1.1 Introduction

This overview paper examines the extent to which environmental assessment (EA) legislation and implementation have reflected changing policy paradigms over the 25 year history of its development in the European Union, from 1985-2010. It presents both contemporary challenges around environmental assessment, sustainability and accountability, and an historical perspective on those challenges. It is organised in six sections, beginning with this broad introduction. It then looks at the context of contemporary debates in EA theory and particularly the gap in the EA literature on accountability (Section 2). The paper then explores changing policy paradigms over the time period – from integration of the environment into decision-making to sustainable development– and how legislation (Section 3) and implementation (Section 4) have reflected these and changing demands for increased accountability. Section 5 draws this together and develops a policy oriented theory of assessment and accountability. The paper concludes (Section 6) with reflections on the role of EA to date as a platform for accountability, and in the future, along with recommendations establishing a broad agenda for further research in this area.

The thesis draws on selected peer reviewed academic and research publications by the author throughout the period of the development of EA legislation in the European Union from 1985-2010. As a PhD Based upon Published Work this overview paper seeks to establish a coherent narrative connecting the selected papers. Philosophically and methodologically the papers published over the period (from 1989-2010) reflect a pragmatic, historical approach using two main research methodologies: i) action-oriented research (particularly in the form of two major case studies written while working on behalf of environmental NGOs at the time (Sheate, 1995b; 1996a)); and ii) policy-oriented research resulting from major research projects undertaken for, among others, the European Commission DG ENV and the Irish Environmental Protection Agency. Other papers provide more theoretical and critical analysis of the development of specific aspects of EA law, implementation and application, while two book chapters provide more consolidating reflections.

1.2 Research questions

The synthesis is centred on the core research question

> *To what extent have EA processes, over the course of their evolution in the EU, provided a platform for enhancing accountability and sustainability?*

Three further research sub- questions help to answer this:

1. *How are accountability and sustainability addressed in the EA literature?* (Sections 2 and 3)

2. *How has the policy context changed over that period* (Sections 2 and 3), and *what are the key milestones in EU EA legislation and policy?* (Section 3)
3. *How is accountability and sustainability reflected in the changing EA legislation* (Section 3) *and in implementation*? (Section 4)

This provides the structure of the overall analysis. Taken as a whole the lessons from this analysis allow the development of a nascent policy-oriented theory and research agenda regarding EA's role in accountability and how EA legislation and implementation in the EU has reflected the changing governance and sustainability paradigms over the last 25 years.

1.3 Selected papers

Table 1 provides a list of the selected papers written over the period and included in this thesis (see appendices). For each paper the page numbers in the thesis are shown, along with its main relevance to the core sections of analysis in this overview paper. Throughout the text reference to these papers is indicated in bold type (e.g. **Sheate, 2009**) to distinguish them from other references and other papers by the author, but not included in the selection for this thesis.

Table 1: Selected papers and relevance to main sections of this overview.

Selected paper number and title ● most relevant ● empirical study	Thesis page numbers	Main Sections		
		2. Background & context	3. EA legislation & changing policy contexts	4. & 5. Lessons from EA implement -ation and discussion
1. SHEATE, W.R., and Macrory, R.B. (1989) Agriculture and the EC Environmental Assessment Directive: Lessons for Community Policy Making. *Journal of Common Market Studies* 28: 68-81.	39-54	●	●	●
2. SHEATE, W.R. (1992) Lobbying for Effective Environmental Assessment. *Long Range Planning* 25: 90-98.	55-66	●	●	●
3. SHEATE, W.R., and Atkinson, N.R. (1995) Public Participation in Environmental Decision-making: the European Dimension. *Environmental Policy and Practice* 5: 119-129.	67-80		●	●
4. SHEATE, W.R. (1995a) Amending the EC Directive 85/337/EEC on Environmental Impact Assessment. *European Environmental Law Review* 4: 77-82.	81-90		●	●
5. SHEATE, W.R. (1995b) Electricity Generation and Transmission: A Case Study of Problematic EIA Implementation in the UK. *Environmental Policy and Practice* 5: 17-25.	91-102		●	●
6. SHEATE, W R (1996a) The Search for a UK Nuclear Waste Disposal Facility: A Case Study of Disputed Project Definition Under the EC Directive 85/337/EEC on EIA. *Environmental Policy and Practice*. 6(2): 75-86.	103-116		●	●
7. SHEATE, W.R (1996b), EIA in the United Kingdom, (Chapter 5) in SHEATE, W. R. (1996) *Environmental Impact Assessment: Law and Policy – Making an Impact II* (2nd edition), London, Cameron May, 300pp. ISBN 1 874698 910	117-152	●	●	●
8. SHEATE, W.R. (1997), The Environmental Impact Assessment Amendment Directive 97/11/EC: A Small Step Forward? *European Environmental Law Review*, 6 (8/9), pp 235-243.	153-164		●	●
9. SHEATE, W. R. (2003a), The EC Directive on Strategic Environmental Assessment: A Much-Needed Boost for Environmental Integration, *European Environmental Law Review*, Vol. 12 (12):331-347.	165-184		●	●
10. SHEATE, W.R. (2003b), Changing Conceptions and Potential for Conflict in Environmental Assessment - Environmental Integration and Sustainable Development in the EU, *Environmental Policy and Law*, Vol. 33 (5): 219-230.	185-198	●	●	●
11. SHEATE, W.R., Dagg, S., Richardson, J., Aschemann, R., Palerm, J. and Steen, U. (2003), Integrating the Environment into Strategic Decision- Making: Conceptualizing Policy SEA, *European Environment*, Vol 13 (1) 1-18.	199-222	●	●	●
12. SHEATE, W.R., Byron, H.J. and Smith, S. P, (2004) Implementing the SEA Directive: Sectoral Challenges and Opportunities for the UK and EU, *European Environment*, Vol. 14 (2), 73-93.	223-248		●	●
13. SHEATE, W. R. and Leinster, T, (2005) SEA of Water Industry Plans and Programmes, *Water Law*, 16 (4):115-121.	249-258		●	●
14. SHEATE, W.R. and Bennett, S. (2007), *The Water Framework Directive, Assessment, Participation and Protected Areas: What are the Relationships?* Synthesis Report to the Irish Environmental Protection Agency, ERTDI Research Programme, Report No. 67 ISBN 1-84095-237-7, October 2007, available at http://www.epa.ie/downloads/pubs/research/water/name,23575,en.html	259-328		●	●
15. SHEATE, W.R., (2009), The Evolving Nature of Environmental Assessment and Management: Linking Tools to Help Deliver Sustainability (Chapter 1) in SHEATE, W.R (2009), *Tools, Techniques and Approaches for Sustainability: Collected Writings in Environmental Assessment Policy and Management*, Singapore, World Scientific, 410pp. ISBN:9789814289689.	329-360	●	●	●
16. SHEATE, W.R., and Partidário, M. R (2010), Strategic approaches and assessment techniques—Potential for knowledge brokerage towards sustainability, *Environmental Impact Assessment Review* Volume 30, Issue 4, July 2010, Pages 278-288.	361-373	●		●

2. Background and context

2.1 Introduction

This section sets out the broad literature background and provides the context to the empirical and theoretical analysis that follows on the basis of the selected papers. It addresses the first research sub-question on how accountability and sustainability are addressed in the EA literature, and includes a brief overview of environmental assessment theory and practice (an extensive subject to which this thesis can only contribute in part), with reference, where appropriate, to specific of the selected papers. What becomes clear is the very real gap in the literature of any explicit reference to key literature on accountability in the governance field. This thesis seeks to address this gap by linking accountability and assessment empirically and theoretically.

2.2 The theory and practice of EA

In 2003, the late John Benson (Benson, 2003) initiated a roundtable debate in *Impact Assessment and Project Appraisal* (IAPA, the journal of the International Association for Impact Assessment) in which he suggested that environmental impact assessment (EIA) was flawed and unfit for purpose in the era of sustainability. The invited respondents to his paper – this author included (Sheate, 2003c) - largely took issue with this claim, although many also recognised some validity in much of what he said. Some (e.g. Weston, 2003) endorsed his view and even went further that EIA, devised as a rationalist tool and as legislated for in the EU, could not deliver what was often claimed for it. This debate encapsulated neatly the range of views of EIA's purpose and the developing theory around it (Lawrence, 1997, 2001; Bartlett and Kurian, 1999). The basic rationalist (positivist) assumption is that the provision of information to the decision-making process will inherently improve decisions (Thérivel, 2004; Kornov and Thissen, 2000; Nitz and Brown, 2001). However, it is more generally acknowledged that the reality is likely to be at least one of 'bounded rationality' (Nilsson and Dalkmann, 2001).

The debate has matured since then, drawing from decision-making theory, participatory models and discourse analysis (e.g. Kornov and Thissen, 2000; Dryzek, 2005; Owens et al, 2004;), becoming more sophisticated and recognising that there are multiple objectives that can be claimed for EIA and that multiple rationalities may come into play (Cashmore et al, 2010). Critical social scientists still take the rationalist model to task as bearing no relation to the reality of decision-making or to issues of power among actors (e.g. Weston, 2000, 2003, 2010; Elling, 2009). However, this polarisation of widely disparate views of rationalists and social constructivists looks increasingly artificial (Owens et al, 2004) with few scholars adhering rigidly to a rationalist model in practice (although policy makers may still subscribe to that limited, instrumentalist view of EA). Much of the literature increasingly supports more deliberative/participative models (Munton, 2003), some authors drawing on a theoretical Habermasian

view of idealised 'deliberative democracy' (e.g. Palerm, 1999; Elling, 2008; 2009), others drawing more on policy analysis and decision-making models (Brown and Therivel, 1999; Thissen, 2000; Nilsson and Dalkmann, 2001; Nitz and Brown, 2001; Noble, 2000; Owens et al, 2004;). Many authors also recognise the need for a wider range of knowledge and values in EA (Nilsson and Dalkmann, 2001; Runhaar and Driessen, 2007; Runhaar, 2009; **Sheate and Partidario, 2010**; Wallington et al, 2007; Bina, 2007; Cashmore et al, 2004; Richardson, 2005) and that social learning may be a potential benefit that might flow from the EA process (Kornov and Thissen, 2000; Fitzpatrick, 2006; Fischer et al., 2009; Jha-Thakur et al, 2009; Cashmore et al, 2010) while power relations among actors are likely to determine the extent to which EA and different values can play an influential role in decision-making (Bina, 2007; Wallington et al, 2007; Richardson,2005; Cashmore et al, 2010; Elling, 2009).

Parallel to theory building has been the development of strategic environmental assessment (SEA) and sustainability assessment (SA) where a technocratic and rationalist model becomes even less appropriate as assessment seeks to influence more strategic level decisions where the very nature of those decisions is invariably more qualitative, less detailed and with higher levels of uncertainty and a wider range of options available (Partidario, 1996; Partidario and Clark, 2000; Eales et al, 2005; Noble 2000; Bina, 2007), and more political than rational (Cowell and Owens, 2006). Different types of knowledge in the policy process can provide sources of policy learning (Radaelli, 2007) and the idea that multiple types of knowledge through participation can improve decision-making is at the heart of a 'democratic pragmatism' model of decision-making (Dryzeck, 2005). Recognition of the processes for, and barriers to, knowledge use and communication should, therefore, help EA contribute more effectively to policy-making and underlying learning processes (Wallington et al., 2007; Bina, 2007; Hertin et al., 2009. Turnpenny et al., 2008; de Ridder et al, 2007; Nilsson et al., 2008; Vicente and Partidario, 2006, **Sheate and Partidario, 2010**). However, much knowledge produced for the benefit of policy may never be used in that policy-making (In't Veld and de Wit, 2000) for a variety of reasons, including wilful neglect (Owens et al., 2004).

Some, particularly those who criticise a rationalist model of EA, would argue that EIA and SEA can only ever support a weak view of sustainability, given its acceptance and basis in capitalist economic growth (Weston, 2003), and that this accords with an ecological modernisation discourse to environmental policy with its emphasis on mitigation and technological solutions (Hajer, 1995). **Sheate et al (2003)**, along with other authors (e.g. Eggenberger and Partidario, 2000; Stinchcombe and Gibson 2001; Sadler, 2005; Gibson, 2006) argue that EA can support a strong view of sustainability, one that is rooted in its integrative concepts, and this is relevant also to making better links between other environmental assessment and management tools for sustainability (**Sheate, 2009**). In practice, it is of course possible for both forms to reside in the same system. It could be argued that the EIA and SEA Directives (OJ, 1985; 2001) in spirit set out to support a strong view of sustainability, i.e. because they seek to establish a high level of environmental protection and avoid environmental impacts this supports sustainable

development. In practice, of course, it may be that a weak view of sustainable development is what prevails, because of the overwhelming dominance of an economic perspective in decision-making. Consequently where SA based on weak sustainability is used rather than SEA, rather than sustainability supporting a high level of environmental protection as it should, there are concerns that it weakens it (Sadler, 2005; Scrase and Sheate, 2002; Morrison-Saunders and Fischer, 2006; **Sheate, 2003b, 2009**).

At the same time as theory has been evolving, we have seen rather less emphasis on quality review of assessments in the literature, where once it was commonplace (e.g Lee and Brown, 1992; Kreuser and Hammersley, 1999; Jones and Wood 1997, 2000). In the EU, given the legal and procedural nature of both the EIA and SEA Directives, evaluating the quality (and/or 'effectiveness') of the *process* (i.e. compliance evaluation) inevitably became a focus for much attention in the early years after implementation – how good was the implementation and did it make a difference (Jones et al, 2007)? In practice, this evaluation was not really even about process – or the *inputs* to the process at different stages (which is quite difficult, time consuming and costly to evaluate), but much more about the *outputs,* particularly the environmental impact statement (EIS) for EIA. Some of this was clearly driven by a desire to follow up and monitor implementation of, and compliance with, the EIA Directive (Lee and Colley, 1992; Lee and Brown, 1992; CEC, 1993; **Sheate, 1992**; Sheate, 1994**, 1996c;** CPRE, 1992; Wood, 2003) – the so-called 'first wave' of environmental assessment described by McGillivray and Holder (2007). But the focus on quality control and EIS review also dominated attention of practitioners and scholars alike because early experience showed that many EISs were of poor quality (**Sheate, 1996c**; Glasson, 1999), with early case law showing that the principles of the EIA Directive 85/337/EEC were slow to be built into project planning, decision-making and judicial review (**Sheate and Macrory, 1989**; Alder, 1993; **Sheate**, 1994, **1996c**; Glasson, 1999; Feldman et al, 2001; Wood, 2003; Macrory, 2004; Kramer, 2008; McCracken, 2010). It was also relatively easy to review EISs against a set of criteria, (Lee and Colley, 1990; CPRE, 1992; CEC, 2001a; Treweek, et al, 1993; Byron et al, 2000; Cooper and Sheate, 2002; IEA, 1991; Hartley and Wood, 2005; Jones and Wood 1997, 2000). This experience was also available to the formal review process of the EIA Directive by the European Commission, providing evidence for the need for the EIA Amendment Directive 97/11/EC in 1997 (OJ, 1997; Wood and Jones, 1991, 1992; CEC 1993; **Sheate, 1995a, 1996b, 1997**; Glasson et al, 1996; Glasson, 1999).

Lawrence (1997) and Noble (2003) make a clear distinction between quality and effectiveness; a good quality EA may not be an 'effective' EA, whatever that might mean in terms of influence on decision-making (**Sheate et al, 2003**; **Sheate, 2009**; Cashmore et al, 2010). For SEA we are still in the relatively early phase of maturing experience and so quality reviews of practice (e.g. Lee et al, 1999; Bonde and Cherp, 2000; Simpson, 2001; IEMA, 2004; SDRN, 2008; CEC 2009; Therivel et al, 2009; Fischer and Gazzola, 2006; Fischer, 2010; Weiland, 2009) along with early case law such as *Seaport*[1] and *East of*

[1] *Seaport* case: for Judgment see Weatherup (2007).

England[2]) have had an important role to play in learning the early lessons of implementation and in promoting SEA as a more proactive and supportive instrument for better planning (**Sheate and Partidario, 2010**; Eales and Sheate, 2010). Evaluating the SEA *process* (rather than the environmental report, or ER) is rare, but was the focus of longitudinal research on a series of case studies for the Scottish Government (the SEA Pathfinder project) from 2005-2009, which allowed a much deeper level of analysis of the inputs at various SEA stages than simply reviewing the outputs (Phillips and Sheate, 2010; Scottish Government, 2010). What quality reviews do not do, of course, is evaluate the quality of *outcome* (i.e. whether it makes any difference to the environment), whether at EIA or SEA level. This is because, as Sheate et al (2001, **2003**) emphasise, evaluating effectiveness of an assessment tool is complicated by the multitude of other factors influencing decision-making.

What is surprising, given the emphasis on participation and communication models of EA, and EA's recognised role as part of environmental policy integration in EU environmental governance (Petts, 1999; Jordan and Lenshow, 2010; Adger and Jordan, 2009), is the lack of any real analysis of EA's role in *accountability*. Cashmore et al (2010), for example, suggest that EA was introduced under the guise of providing accountability (p.8), but this is presented merely as an aside that appears to have assumed a place in EA 'common knowledge'. Accountability is implicit in some of the EA quality review and control debates (e.g. **Sheate, 1992, 1995a, 1996b**), but not explicitly framed in a governance way, although Sheate et al (2001) do refer to accountability as a key aspect of integration of the environment in strategic decision-making. In Canada, accountability features strongly within the guiding principles for SEA implementation (and government guidance), which direct that **i**n implementing the Cabinet Directive on SEA, federal departments and agencies should be guided by seven principles (Government of Canada, 2004, Section 2.2.1, cited in Sadler, 2005), including that SEA should be part of an open and accountable decision making process. But only Li (2009) relates EIA explicitly to the academic accountability literature and in that case very specifically as a means of supporting legitimacy of the proponent and decision making, where participants in an EIA for a Peruvian mining project were seen to be co-opted into the process (or even captured), resulting in so-called 'shared responsibility'. Owens et al (2004) also recognise that assessment outputs can be invoked (as Li suggests) to rationalise decisions already made on other grounds, while Elling (2008, 2009) considers legitimacy the predefined target for authorities. Cowell and Owens (2006) provide a more political perspective on the use of EA by NGOs while Holder (2004) suggests EIA may be used as a delaying tactic by NGOs. Yet even the governance perspectives on EA (e.g. Turnpenny et al., 2008; Hertin et al., 2009; Jordan and Lenschow, 2010) do not examine accountability explicitly.

One reason for this gap may be that NGO actors rarely publish academic papers on NGO perspectives on EA, perhaps with the exception of this author. There is an increasingly rich academic literature *about*

[2] *East of England* case: for Judgment see, Mitting (2009).

NGOs and 'non-profit advocacy', the democratic functions of NGOs (Guo and Saxton, 2010) and their own accountability and legitimacy of action (e.g. Princen and Finger, 1994; Jepson, 2004). Few NGO activists, however, view their EA activities from an academic perspective, or indeed as suitable for action research (Reason and Bradbury, 2007). The EA literature lacks a consistent contribution from this important set of stakeholders and therefore a clear articulation of EA in public interest accountability terms**. Sheate (1992; 1994; 1995a, b; 1996, a, b** among others) were written principally based on NGO experience, and provide valuable insights, therefore, into the NGO perspective on EA in those early formative years of EA legislation. The author is particularly critical, for example, of the *de minimis* approach adopted by the UK Government in implementing the EIA Directive (**Sheate, 1992**, 1994, **1996b**). More recent papers, such as Eales and Sheate (2010; 2011), Sheate and Twigger-Ross (2010) and **Sheate and Partidario (2010)**, also reflect work undertaken in part for NGOs on SEA implementation, for example in advising on judicial review.

2.3 Accountability and governance

Jordan and Lenshow (2010) review environmental policy integration (EPI) in the EU over the last 20 years, finding that while the political commitment to EPI is widespread there is deep disagreement as to how it is delivered in practice. Multiple perspectives on EPI and its role in governance and practical implementation are possible, which see different roles for different policy instruments (Jordan and Lenshow, 2010). EIA and SEA - as key policy instruments - have formed an integral component of the EU's approach to EPI, reflected in successive Environmental Action Programmes, as examined in a number of the selected papers in this thesis (**Sheate, 1995a, 1997, 2003b**). However, also central to governance are the concepts of 'accountability' and 'legitimacy'. Van Kersbergen and van Waarden (2004), drawing on a cross-disciplinary analysis of governance literature, highlight the importance of shifts in governance over time: vertically – up and down local, national, international levels, and horizontally – for example from the executive to the judiciary, along with the increasing use of audit and inspection (Levitt et al, 2010). Paralleling these shifts have also been shifts in the way in which governance has been conceptualised (Erkkilä, 2007) and particularly the trend towards greater accountability in governance and decision-making. Legitimacy can be seen as a counterpart of accountability, whereby assessment processes may be seen to provide legitimacy for decisions made (Li, 2009), i.e. the actions are "*desirable, proper or appropriate*" (Suchman, 1995, p.574). In practice this may occur through the involvement of stakeholders and participation of the public and NGOs, which may be seen to provide some legitimacy for that decision (Li, 2009; Elling, 2009) and/or may force official accountability (Goodin & Dryzek, 2006).

Accountability is essentially about holding public bodies to account and/or making them take responsibility for their actions. Paul (1991, p.5) cites Smith and Stanyer's (1976) definition:-

"At its most elementary, public accountability simply requires that public bodies give an account of their activities to other people and provide a justification for what has been done in terms of other people's values, in a way that private bodies do not."

From an EA and NGO perspective the justification in terms of other people's values is particularly important, i.e. a recognition that other perspectives on decisions may exist and indeed be valid. Accountability in governance is normally seen as taking one of two main forms: 'Exit' or 'Voice' (Paul, 1991; Blair, 2000; Ackermann, 2004; Erkkilä, 2007). Individual members of the public can adopt the 'Exit' strategy primarily when dealing with the private sector as a customer, with the company being held to account by the customer leaving their patronage and taking their business elsewhere. Companies are very much alive to the concept of customer choice (Paul, 1991; Ackermann, 2004). In the public sector the exit strategy is much less likely to be available (other than at periodic elections) and the alternative is therefore 'Voice', i.e. to make your opinions known to politicians, civil servants/bureaucrats through a range of processes and engagement opportunities, or protest, as well as through periodic elections and voting, and so hold politicians to account. In a representative democracy, the elected representatives need to be reminded and made aware of citizens' views and not just at election time, if they are to exercise their responsibilities for democratic local governance (Blair, 2000).

The governance literature on accountability cited above, focuses on defining a number of forms of accountability models, including:

- democratic: political and bureaucratic accountability – re: proponents and decision-makers;
- corporate accountability – holding of companies to account;
- professional accountability – professionals such as consultants have professional and/or ethical standards to uphold.

Blair (2000) in particular, recognises that formal procedures provide an important element in delivering democratic local governance, as a mechanism through which the public and civil society can act on politicians and bureaucrats. EA – as a formal procedure – could be regarded as having become a form of institutionalised accountability – a platform for scrutiny through the EIS, ER, and public inquiry process e.g. on issues relating to quality of assessment, alternatives, scope etc. For developers, key environmental policy principles, such as the polluter pays and precautionary principles, apply in that they need to be able to justify why their proposal is the best or, at least, isn't the worst. For public servants there is a need to justify to elected politicians and to the electorate that the proposal/decision is the best in the public interest in relation to the environment.

3. EA legislation and changing policy contexts

3.1 Introduction

This section seeks to answer the second and third research sub-questions: *(2) How has the policy context changed and what are the key milestones in EA legislation and policy?,* and the first part of *(3) How is accountability and sustainability reflected in the changing EA* ***legislation*** *and implementation?* This section focuses on the evolution of the legislation and the prevailing policy and governance contexts in which that took place, with the selected papers providing unique insights into the EA policy development process over that period.

3.2 Shifting paradigms, changing legislation

Twenty five years of evolution of EA legislation in the EU has not taken place in isolation from a number of other significant developments in European environmental policy and law. Figure 1 provides a simple graphic timeline diagram to locate key pieces of relevant environmental policy and legislative developments over the 25 year period. Presenting these developments in this way immediately highlights a number of important juxtapositions of key events, such as the timing of the Espoo and Aarhus conventions in relation to the EIA Amendment Directive and the SEA Directive, and these are discussed further below.

Environmental policy integration has been a central principle of EU environmental policy since the first EEC Environmental Action Programme in 1973. As **Sheate (2003b)** highlights, there has been a gradual shift from environmental integration as a policy principle to sustainable development and it is notable that the EU Sustainable Development Strategy (CEC, 2001b) makes no reference to environmental integration, the transition as it were by then seemingly complete (while raising questions as to what this means for environmental protection). Central to this gradual development was the changing status of the environment within the EU Treaties: from non-existent in the original Treaty of Rome to being central within the Single European Act and Maastricht Treaty, to sustainable development being firmly established in the Lisbon Treaty in 2007.

At a pan-European level, through the UNECE, interweaving (rather than paralleling) the EU EIA and SEA legislation have been the Espoo and Aarhus Conventions, reinforcing EIA and SEA legislation within the EU and leading on other aspects such as access to information, public participation and access to justice. There have been important synergies (as well as tensions) between the two bodies of law (EU and UNECE) (Robinson and Elvin, 2004; Marsden, 2008), but ultimately it could be seen to be a creative relationship. They have provided different targets and emphasis for NGO activity, locally and at the international level, e.g. in compliance monitoring of the Aarhus Convention and pressing for the SEA

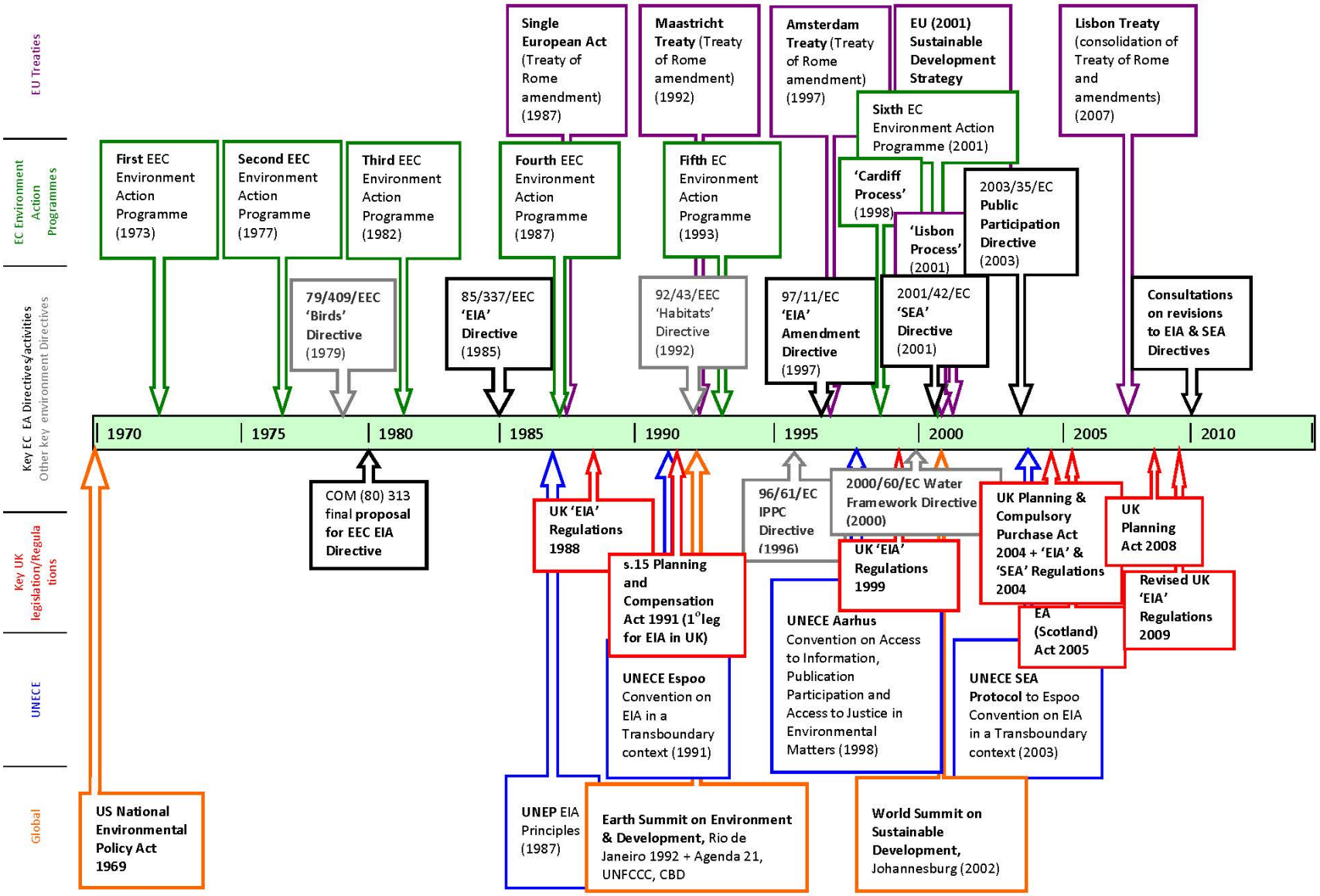
Protocol to the Espoo Convention to broaden and strengthen the lead given by the SEA Directive beyond the EU (see for example European Ecoforum, 2011).

Van Kersbergen and van Waarden (2004) and Erkkilä (2007) point to shifts in global governance – an internationalisation of much decision-making and a shift from the local to the national to the supra national. Unalan and Cowell (2009) comment specifically on the '*Europeanization*' of environmental governance in EU Member States, as national policy and legislation has had to become aligned to the body of EU environmental law and policy (i.e. the 'Environmental aquis'). This Europeanization is invariably somewhat uneven (Borzel, 2000), but Europeanization can be seen, for EU Member States, as an important part of this changing global governance trend over recent decades.

From the very early implementation of EA there were key challenges posed by a changing policy context. In relation to agriculture, for example, the recognition that agriculture's effective exclusion from EIA and land use planning was no longer appropriate in relation to wider evolving EU policy on the environment (**Sheate and Macrory, 1989**). Opposition to EIA of agricultural activities reflected a wider ambivalence (even hostility) among some Member States such as the UK, to the need for EIA at all (Wathern, 1988). The introduction of EA legislation had already been a long process by the time the EIA Directive was agreed in 1985, taking a decade or more from the early beginnings (**Sheate and Macrory, 1989**), not least because of this opposition by some Member States. Once agreed, however, issues of implementation then came to the fore, along with the role of public participation and the quality of the assessment process (**Sheate, 1992**). Even then, (in 1992), the need for SEA was being highlighted by NGOs and efforts made to secure changes to legislation (**Sheate, 1992; 1996b**).

Following the Rio Earth Summit in 1992, the importance of public participation was given an added impetus by Principle 10 of the Rio Declaration, that : *"Environmental issues are best handled with the participation of all concerned citizens, at the relevant level..."*. Principle 10 also lays out the basis for access to information, public participation and access to justice measures that eventually became enshrined in the Aarhus Convention (**Sheate and Atkinson, 1995**). By the early to mid-1990s changes were being sought for an amendment directive with efforts by NGOs to push the boundaries particularly with regard to the need for SEA and better consideration of alternatives, and with problems over the definition of 'project' (**Sheate, 1995a**). Here there were bigger and more fundamental philosophical issues associated with the way in which NGOs viewed EA and its potential for environmental integration. They were not just concerned about transposition of the Directive and its implementation, but also about "*Using the Directive*" (**Sheate, 1992**, p.94) - making improvements to the Directive so that it could be an effective instrument for accountability and an aid to decision-making.

Figure 1: Timeline for the Evolution of Environmental Assessment Legislation in the European Union 1985-2010



By 1997 the Amendment Directive (97/11/EC) had brought some success, including some reinforcing of alternatives and implementation of the Espoo Convention transboundary consultation requirements (**Sheate, 1997**). A new Annex III on selection criteria for projects to be subject to EIA was a direct result of lobbying efforts by CPRE on the Commission (**Sheate, 1995a**). A key issue of accountability had, however, been dropped from early drafts of the Amendment Directive – a formal scoping stage – because of the unlikelihood of getting it through the Council of Ministers (**Sheate 1997**). Some of the changes and improvements to the Directive, however, reflected both the efforts of NGOs and the increasing role and flexing of its muscles by the European Parliament, which also became an increasing focus for NGO lobbying activity.

By 2001, with the advent of the SEA Directive (2001/42/EC), EA had been successfully extended to plans and programmes (though not policies as originally intended) (**Sheate 2003a**). The SEA Directive reflected the changed legal basis of the Treaty of Rome, particularly article 174 (environmental protection) and Art 6 (environmental integration and sustainable development) (**Sheate, 2003a**). It also reflected the influence of the Aarhus Convention in improving the requirements for public participation in decisions on plans and programmes. Considerable amendments and improvements had been achieved by NGOs lobbying the Commission and the European Parliament, both of which had helped to push the legislation along (**Sheate, 2003a**). Implementation of the SEA Directive (via one catch-all regulation in the UK cf. the plethora of sector specific regulations for EIA) reflected a continuing ambivalence of the UK Government to EA (even though of a different political persuasion to the early EIA negotiations). It suggested a continuing reluctance to embrace EA wholeheartedly as a means of supporting better strategic decision making, and perhaps a degree of inertia within the civil service where the dominant view - administrative rather than expert - tends to resist anything that might impose an additional 'burden' on developers or authorities (**Sheate, 1996b; Sheate, 2003a, b; Sheate et al 2004**). Scotland took a different tack, choosing to introduce its own Environmental Assessment (Scotland) Act 2005 extending the application of SEA to higher level strategies and proposals. Implementation there, however, has not entirely reflected the original enthusiasm suggested by the passing of the legislation (Phillips and Sheate, 2010).

Specific sectors highlight the distinction in the UK (and England in particular) between sustainability appraisal (SA) and SEA. SA applies in the land use/spatial planning arena, following the Planning and Compulsory Purchase Act 2004 requirement for SA of regional spatial strategies (RSSs) and local development frameworks (LDFs). The Government had thought that its SA approach adopted prior to the SEA Directive would meet the SEA Directive's requirements in full, but it was clear that this would not be the case without significant strengthening with regard to the baseline information provision and consideration of alternatives, for example (**Sheate, et al 2004**). In other sectors, such as water, SEA is required rather than SA, and that has had to be implemented in both the public sector (e.g. for river

basin management plans (RBMPs) under the Water Framework Directive) and the private sector water companies acting as emanations of the state (**Sheate and Leinster, 2005; Sheate and Bennett, 2007**).

Coming to the present day, with the SEA Directive in place and early experience of how it is being implemented, we can see that the SEA Directive reflects the prevailing paradigm of sustainable development, compared to the EIA Directive. While sustainable development is in the main objective of the Directive, the shift has been from taking the environment into account (integration) to a high level of environmental protection to contribute to sustainable development (**Sheate, 2003a, b**; **Sheate et al 2003**; **Sheate et al 2004**; **Sheate, 2009**).

The EIA Amendment Directive 97/11/EC still took a rather technocentric, instrumentalist view (referring to consultation rather than participation), failing to reflect the more deliberative view of EA prevailing even by 1997 (Holder, 2004, p191). However this has since been supplemented by the Aarhus provisions and the Public Participation Directive 2003/35/EC (OJ, 2003). It is also important to recognise that the political nature of the negotiations over amending the EIA Directive has tended to result in a *de minimis* approach to revisions, and such revisions have often taken place during efforts to 'streamline' procedures (**Sheate, 1996b**). Holder (2004) also suggests that using EA as a basis for legal challenge is frequently unsuccessful, and that wider participation and communication among stakeholders through EA may enable it to be used as a means to mediate conflict. She suggests a third strategy (in addition to legal challenge and mediation), the use of EA as a means of causing delay to allow greater public awareness to be mobilised in the hope of influencing decision-making politically. But NGOs and other advocates have not viewed EA purely as the legislation frames it, but have sought to frame it in their own terms, informed by best practice and how it can deliver their objectives of better environmental protection. Rather than as Holder suggests to delay decisions, a higher level objective may be to hold proponents and decisions makers to account (**Sheate, 1992**; **Sheate and Atkinson, 1995**); otherwise it is unclear why NGOs and individuals might sometimes pursue apparently 'hopeless causes'. Delay has a role, and as a way of marshalling public and political support may well have been a prime motivation in some cases (e.g. in Twyford Down, Bryant, 1996), but holding up a mirror to government may be longer lasting (**Sheate, 1992, 1995b, 1996a, b**).

In contrast to Holder (2004), Jans and Marseille (2010) concluded that NGOs in the Netherlands are actually rather successful litigants, more so than others, in part because they pick and choose their cases carefully (because of cost and effort involved). Significantly their appeals are also more successful on substantive (rather than procedural) grounds than the appeals of others (50% compared to 20% for non-NGO appeals). Jordan & Lenshow (2010, p.152) suggest that NGOs don't push EPI and sustainable development, although this doesn't reflect this author's experience either in the early years of the development and implementation of EIA or in more recent work in relation to SEA (Eales and Sheate, 2010; Sheate and Twigger-Ross, 2010; Sheate et al, 2011). On the other hand, it may reflect the lack of

academic literature in this EA field. Lee and Abbott (2003) suggest that the Aarhus Convention, in the way it is framed, tends to promote participation by NGOs rather than by individuals, but this may reflect the familiarity and skill NGOs have developed with the Aarhus Convention given their detailed understanding of it and involvement as a 'reference group' in its development and implementation (Goodin, 2003; Wates, 2005; European Ecoforum, 2011).

There have been increasing efforts at improving EU accountability, e.g. through the co-decision procedure established in 1992 under the Treaty of Maastricht and strengthened further under the Treaty of Amsterdam in 1997, where the European Parliament and Council seek to reach agreement in most legislative decisions. The creation in 1994 of the Committee of the Regions under the Treaty of Maastricht, also created a vehicle for regional and local authorities to have a direct voice in the European decision-making process at the earliest stage through mandatory consultations by the Commission, Parliament and Council. The European Parliament has also exerted its desire to flex its muscles and this is reflected in changes to EA legislation inserted at parliamentary stages (**Sheate, 1997**; **2003a**). A European Commission White Paper on European Governance (CEC, 2001c) also emphasised an increasing role for civil society in EU policy making.

Current legislation on EA – EIA and SEA Directives, and the Espoo and Aarhus Conventions - clearly now reflect much more strongly than 25 years ago a wider role for environmental assessment than just providing information to the decision-making process, but as a key instrument in helping to promote sustainable development. It also reflects the efforts of NGOs to frame EA as a means to improve accountability (**Sheate, 1997**; **2003 a, b**; Sheate et al, 2001; European Ecoforum, 2011). This has become increasingly important given Kramer's (2008) observation that the Commission, since 2006, in no longer pursuing complaints, was likely to be failing (under Article 211 of the EC Treaty) to ensure that EC environmental law is 'applied' not just transposed. The sustainable development paradigm is not without its problems for environmental assessment – greater integration brings its own challenges (Scrase and Sheate, 2002; Sheate et al 2001, **2003**), but the context is a changed one. The role of EA can be seen by some as supporting an ecological modernisation agenda, but this thesis points to a strong sustainability purpose behind the key NGO advocates for the initial development and the continual strengthening of EA legislation, seemingly contrary to some suggestions that NGOs are not interested in environmental policy integration.

4. Lessons from EA implementation

4.1 Introduction

This section focuses on the second part of the third research sub-question (3): *How is accountability and sustainability reflected in the changing EA legislation and **implementation**?* In doing so, two main areas

are covered by the selected papers – EIA case studies, and SEA and policy research – drawing together evidence for the way in which EA in its various forms can provide a platform for accountability. This represents empirical evidence for the role of EA in accountability where previously it had been largely rhetorical, but also suggests a more enduring and alternative purpose to EA than merely the provision of information to the decision-making process.

4.2 EIA case studies

Sheate (1996b) provides an overview of the early implementation of the EIA Directive in the UK and the plethora of separate sector-specific regulations promulgated under the European Communities Act 1972. That book chapter also highlights the *de minimis* approach often adopted by the UK government to EIA implementation and also how the regulations had arguably downgraded some requirements of the EIA Directive to being optional on the developer, e.g. consideration of alternatives, cumulative effects, forecasting and assessment methods (pp.57-59). An important consequence of these elements being downgraded is that the onus is no longer placed on the developer to justify its proposal through providing certain information, but depends instead on others highlighting the lack of information, or the poor quality of the information in order to hold the proponent properly to account.

Two historical case studies provide evidence of how the EIA process – and critical elements of that process – has been used to hold proponents and decision-makers to account. **Sheate (1995b)** and **Sheate (1996a)** highlight the key elements of EIA that provided a focus for NGOs and the public in the North Yorkshire power lines and UK Nirex Rock Characterisation Facility (RCF) cases respectively. These were:-

- Process issues – transposition and application of the EIA Directive;
- Scope of the EIA – failure of the EIA of the power station to address the sub-projects which were essential to its functioning; the relationship between the RCF and any subsequent repository for radioactive waste;
- The issue of alternatives – linked closely to the separate consent procedures that applied in North Yorkshire to the power station and the power lines concerned; and in Nirex to alternative locations and disposal options;
- The nature of the impacts and the quality of the assessment undertaken.

Both cases are based on empirical action research carried out in support of NGO activity (for CPRE in the case of North Yorkshire, and for Friends of the Lake District in the case of Nirex). While not expressed in such terms, fundamental to both cases were issues of accountability, illustrated by the fact that both were also pursued through legal complaints to the EU and through public inquiries (in terms of democratic accountability of a Member State and government decision-making, and in terms of

corporate accountability in terms of the proponents concerned, and even professional accountability of consultants cross-examined). In the Nirex case a European Parliamentary Ombudsman complaint about the Commission's handling of the complaint was also pursued even though there was (justifiably as it turned out) little expectation of success (European Ombudsman, 1999: Case 106/97/PD). Essentially it was seen as a matter of principle that the Commission in exercising its duty to ensure the objectives of Directives are met should be held accountable for its decision not to pursue a complaint further to the European Court of Justice (ECJ).

Central to the North Yorkshire case was the lack of accountability of the Secretary of State in making his original decision to grant consent to the Wilton power station without sufficient information about the environmental impacts (**Sheate, 1995b,** p.18). The lack of assessment of the power lines at the time of the power station EIA meant that such issues were never brought to the attention of the public and interest groups, who otherwise would have sought to pursue these issues, e.g. through scrutiny of the EIS and at a public inquiry. The central issue of an alternative to the Wilton power station, e.g. an alternative location that would minimise the need for power transmission lines, was never addressed – a fundamental issue associated with the links between EIA and SEA and the appropriate level at which to consider alternatives. The fact that the National Grid Company (NGC) was obliged to connect a new power station into the national grid even though it had not been consulted prior to the decision highlights the lack of accountability in that particular case. In effect the accountability for the power lines decisions was transferred to the NGC, via the power lines consent process, EIA and subsequent public inquiries. The whole process eventually took more than ten years before NGC received final consent for all parts of the new line. These EA arguments were used at the main public inquiry into the power lines and the Inspectors concurred with the view that power lines should be considered within the scope of a power station application (**Sheate, 1995b,** p.22), as did the European Commission (**Sheate, 1995b**, p.19).

Alternatives were also absolutely central to the Nirex case (**Sheate, 1996a**) as was the scope of the EIA – was it just a rock characterisation facility or was there a clear link to a proposed repository for radioactive waste and therefore should the assessment consider those potential impacts as well? The Secretary of State's decision to reject Nirex's appeal and not give consent (GONW, 1997) represented a remarkable victory for opponents. Nirex had been forced by the inquiry Inspector to reveal information they had kept secret, such as the multi-attribute decision analysis criteria for their site selection. It was on the poor assessment of alternatives that Nirex was found wanting, as well as poor science (quality of assessment) and the impact on the Lake District National Park (GONW, 1997). Critical to the alternatives argument (and the fact that Nirex had offered information only about one alternative location at Dounreay in Scotland, but had considered many others) is that without adequate information on alternatives it is impossible for others, including the local planning authority, to fully evaluate the EIS or

the EIA process, or indeed for the local authority to account for its stance, opposing the application, to its local citizens (**Sheate, 1996a**).

From both of these cases we see that the quality of the environmental assessment and the process through which that assessment was undertaken, provided a genuine platform for the NGOs and others to hold the proponents to account. In the case of North Yorkshire the accountability issue was still significant, even though the power lines went ahead; it took ten years to secure the routes, with significant modifications along the way. Perhaps unfairly for NGC they were held to account for the final power lines proposed and constructed, even though perhaps the proponents of Wilton power station should have borne more responsibility, since they were the ultimate cause of the impacts. For Nirex the decision caused a complete re-examination of their *raison d'etre* and a clear-out of top management, followed from 2003 by a lengthy public consultation process on options for radioactive waste disposal (CORWM, 2006). For NGOs the decision was a re-affirmation that the public inquiry process, and EIA, was a worthwhile process in which to engage.

The issues of screening and scope of the assessment were central to both – what is the project – when is a project a project, when is it a programme or a sub-project (Sheate et al, 2005)? This in turn has a bearing on which alternatives should be considered and assessed and whether the public can participate in an 'early and effective' manner. Had a formal, public scoping process been undertaken - as actively campaigned for by NGOs for many years (**Sheate, 1992**) – these issues could have been addressed much earlier in the whole planning and EIA process. Recent UK case law[3] has confirmed, as argued in **Sheate, (1995b)** and **Sheate (1996a),** that this kind of artificial splitting of projects for EIA can circumvent the purpose of the EIA Directive (Stookes, 2011). Yet the boundaries between projects and sub-projects/programmes could be readily resolved through the current (2011) review process of the EIA Directive, by amending the definition of project to include 'associated works or component schemes' (**Sheate, 1995b**) and requiring a 'principal project/accessory' test when screening, as occurs in Canada and recommended in Sheate et al (2005). This would entail identifying which is the principal project and which are accessories to it and therefore those that should be covered by the EIA of the principal project.

4.3 SEA and policy research

Sheate et al (2001) – in a major study for the European Commission DG XI (now DG Environment) on SEA and integration of the environment in strategic decision-making - looked at the role SEA (or aspects of SEA) plays in high level decision-making, through the examination of 25 country studies and 20 specific case studies of SEA. That publication is too large to be included in the collection of papers for this thesis (three volumes), but aspects of it are explored in **Sheate et al 2003** and **Sheate 2003b**.

[3] *R (Birch) v Barnsley Metropolitan Borough Council* [2010] EWHC 416 Admin.

The study looked at a range of communication, organisational and institutional models for the way in which the environment is integrated into strategic decision-making in practice, and how SEA can play a part. Two key themes that emerged from that analysis included transparency through public participation, and accountability:

> *"Public participation is used here as a generic term for a wide range of communication tools, but seen here as a key tool for integrating the environment into decision-making. However, it must also be recognised that public participation has a much wider value in a democratic society, distinct from the environment, sustainability and SEA, and is fundamental to ensuring policy and decision-making accountability. It only has an integration role where used within an appropriate integration process, such as SEA or Local Agenda 21."* Sheate et al (2001) p 58.

And specifically on accountability:

> *"SEA creates an auditable trail, which helps increase transparency and accountability. The SEA Directive will expose polices to greater scrutiny just as EIA has exposed decisions at plan and programme level. This will inevitably lead to pressure building up to extend EA to the policy level. SEA provides something that can be audited. Equally, auditing and monitoring is essential to ensure effective SEA....."* Sheate et al (2001, p.84)

It is transparency, therefore, that facilitates accountability (rather than simply the 'rationalist' provision of information to the decision-making process), since it allows for external scrutiny of that information. **Sheate et al (2003)** further highlight the importance of early public participation and SEA, for example in relation to policy making, not just plans and programmes, in order to focus ideally on problem solving and consensus building, and *"to allow the environment to have a voice, rather than merely commenting on proposed solutions."* (p.12)

As Sadler (2005, p.7) comments in relation to political motivation and the extent that the environment has a voice and is not downgraded in a move from SEA to more integrated forms of assessment:

> *"This last issue has become a matter of increasing attention, following a recent study of the use of SEA and other tools in strategic decision-making in all EU member states (Sheate et al 2001). A stronger, environmentally-oriented ('dark green') concept of sustainable development is thought to underpin SEA compared to the weaker ('light green') version inherent in balancing a wider scope of impacts in the SA process, suggesting a divergence of the two fundamental EU policy thrusts of environmental integration and sustainable development (Sheate 2003). In principle, of course, these aims should be convergent and reinforcing, so that SEA in providing for a high level of environmental protection promotes sustainable development (and vice versa for SA)."*

Implementation of the SEA Directive has provided opportunities for opening up scrutiny of some sectoral decision-making that has tended to be rather inaccessible to the public in the past, and indeed has helped shape some decision-making processes, such as Offshore Oil and Gas, and Offshore Wind Energy (**Sheate, et al, 2004**). The water sector is a particularly interesting one because strategic responsibilities are split (in the case of the UK) between public regulators and private utility companies. Unusually, the private sector water companies come under the remit of the SEA Directive in relation to

water resource management plans and drought plans (**Sheate and Leinster, 2005**) as well as the Environment Agency being required to apply SEA to river basin management plans (RBMPs) and programmes of measures under the Water Framework Directive (WFD). In Ireland, where water is supplied by local authorities, there are interesting interactions between the WFD and other legislation, especially at county development plan (CDP) level where new infrastructure may trigger an amendment to the CDP and therefore potentially require SEA (**Sheate and Bennett, 2007**). In the context of the WFD, lengthy consultation periods of six months were required for public consultation on draft RBMPs, offering at least the opportunity for a greater degree of scrutiny of potential infrastructure development proposals at an early stage. One case study in particular highlights the potential for interaction between the WFD, SEA Directive and the Public Participation Directive – that of the International River Basin Districts – NS-SHARE project (between the Republic of Ireland and Northern Ireland) (**Sheate and Bennett, 2007**). The SEA Directive, already making provision for transboundary consultation processes, provides a useful mechanism for seeking to deliver early and effective public participation.

In practice, it is unlikely that anyone would claim the first round of SEAs of RBMPs in place by late 2009 (certainly in England and Wales) were particularly influential on the plans and programmes of measures, but this was largely because of a very prescriptive SEA process established by the Environment Agency and a steep learning curve on behalf of those developing the programmes of measures and RBMPs. In many ways the RBMPs suffered from the perception that they were 'environmental' plans (and therefore there was difficulty justifying expenditure on an effective SEA process even within the Environment Agency), which in many ways they were, but that does not mean they cannot have negative environmental impacts. Perhaps also because of this apparent environmental nature they did not tend to come under particularly intense scrutiny by NGOs. Had they done so the SEA processes may have been found wanting: in terms of the approach to the assessment, the extent to which it was integrated (or not) with the plan/programme making processes, the consideration of alternatives and cumulative effects. All of these are recurring themes around the quality of the assessment processes that provide a potential platform for seeking accountability of the plan or programme making process. The SEA Directive made explicit provision for this in Article 12 to ensure that quality is sufficient to meet the requirements of the Directive, having learned directly from the experience of the EIA Directive (**Sheate, 2003a**; CEC, 2003; Robinson and Elvin, 2004). The clear intention here is that poor quality in the assessment would be unable to meet the substantial requirements of the Directive and therefore deliver its objectives.

SEA – through aspects around quality of assessment and process - may provide a platform for accountability in a similar way that assessment techniques provide a platform for knowledge brokerage (**Sheate and Partidario, 2010**). Power relations mediate between these, i.e. the extent to which knowledge is shared and/or authorities/proponents held to account, but often the power of NGOs is underestimated. Taking a long-term view the environmental NGO movement has consistently used the

legislation – through lobbying and then using the changed legislation – to try to increase accountability. In fact, the ability and capacity of NGOs to hold proponents and government to account is implicitly enshrined in the Government's laissez faire attitude to quality assurance in EIA/SEA – a reliance upon third parties to pick up on issues and challenge, and the rationale for not having an EA authority to scrutinise the process (**Sheate, 1992**, **1996b**, CLG 2010a).

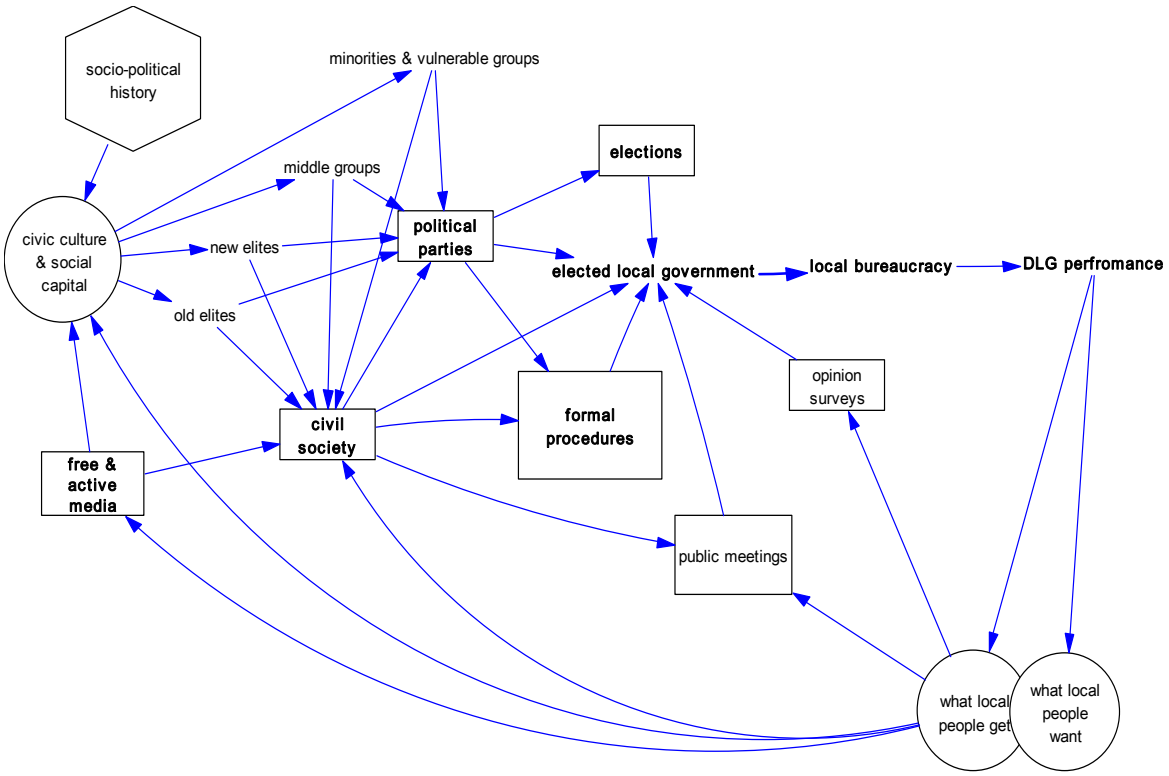
What has become apparent is that the pressure to apply SEA at the policy level has indeed happened, as **Sheate et al** (2001;**2003**) and **Sheate (2003a, b)** anticipated it would once the SEA Directive was in place and the decisions made prior to SEA being applied at plan and programme levels were exposed. Lack of policy SEA has been the root cause of problems over controversial schemes in the UK, such as Eco-towns (**Sheate and Partidario, 2010**), regional spatial strategies, and national policy statements (on energy, ports) (Eales and Sheate, 2010; 2011). Arguably, the failure to open up these higher levels of decisions to proper participation through SEA represents a real missed opportunity to generate greater public interest in good governance.

5. Discussion

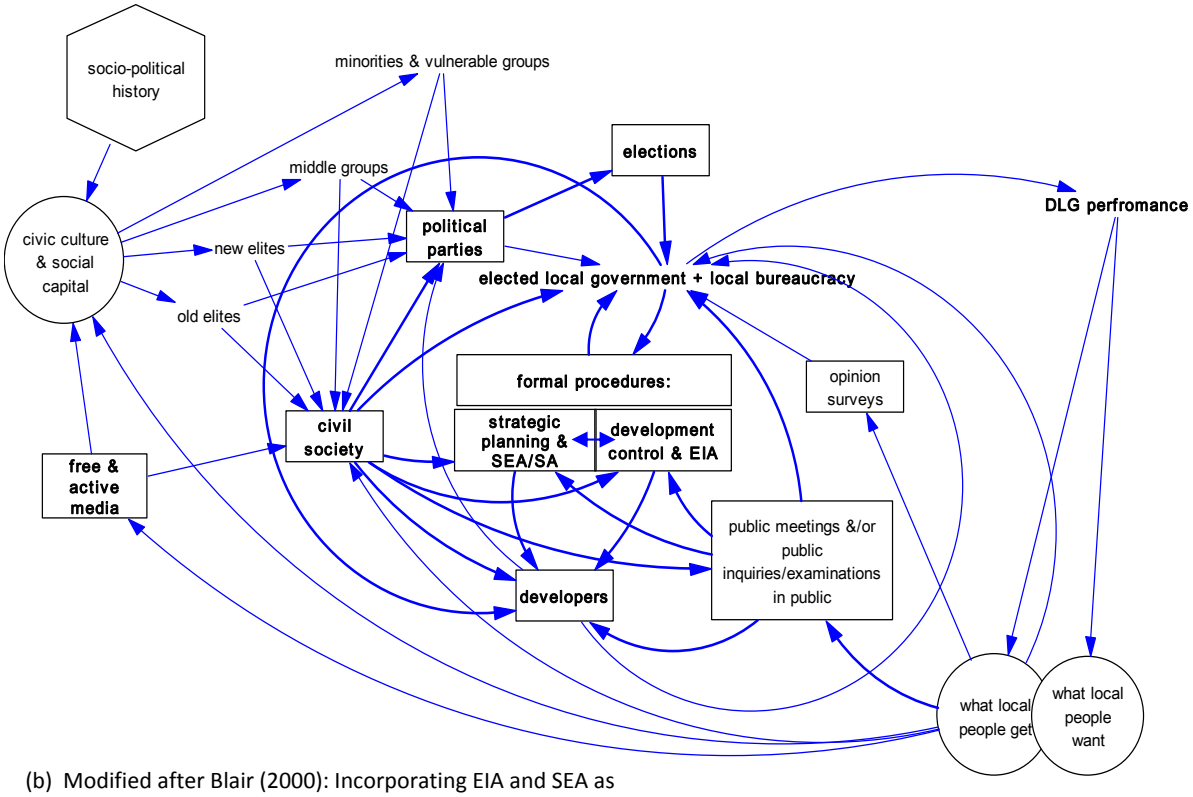
5.1 Assessment, sustainability and governance: towards a policy-oriented theory

For EIA, both the North Yorkshire and the Nirex cases showed that assessment was rigorously scrutinised by NGOs and the public at public inquiries, with the use of formal complaints to the EU over alleged failure of compliance to challenge whether the Government had complied. The decision in Nirex by the Secretary of State to reject Nirex's appeal showed that the efforts to hold the proponent and the Government to account, in what had at first seemed like a hopeless case, had been well worthwhile, and indeed changed the course of the subsequent debate on radioactive waste disposal.

Blair (2000) provides a useful model of democratic local governance (Figure 2 (a)) that can be adapted to EA (Figure 2 (b)). In this model democratic accountability of elected local government (and bureaucracy) is secured*, inter alia*, through the actions of civil society, political parties and elections, directly and via formal procedures. Once EIA and SEA are delineated as distinct formal procedures the potential lines of accountability become quite elaborate. NGOs can seek to exploit these lines of accountability at project and at strategic plan/programme EA levels (Figure 2(b)) by holding to account developers and local government via EIA and SEA (and associated planning processes). Similarly, local government can hold developers to account and vice versa. EIA and SEA act as platforms or an interface through which this accountability can be sought. The public also has a role, although this is not delineated in detail in Figure 2 (b) to avoid confusion. It can also be seen how SEA and EIA could hold each other to account, given the close relationship between EIA and SEA, e.g. through explicit tiering processes, as analysed in Sheate et al (2005), **Sheate and Bennett (2007)** and **Sheate (2009)**.



(a) Formal procedures and civil society in democratic local governance (re-drawn from Blair (2000), p.34



(b) Modified after Blair (2000): Incorporating EIA and SEA as formal procedures for democratic accountability

Figure 2: EIA and SEA processes as platforms for democratic and corporate accountability in democratic local governance (modified and adapted from Blair, 2000)
(Note: bold arrows indicate lines of accountability influenced by NGOs/local groups; (direction of arrows indicates who/what is held to account by the entity at the starting point of the arrow).

So, for example, **Sheate and Partidario (2010)** in relation to the eco-towns case example (and Eales and Sheate (2010, 2011) in relation to national policy statements), highlight, on the one hand, the apparent disinterest in Government in the UK in seeing SEA/SA as a positive tool for enhancing planning, and, on the other, EA as a focus for NGOs to hold Government to account for policy decisions that appear to be rushed through with inadequate public scrutiny. What is remarkable, given 25 years of EA, is that Government attitude is still largely ambivalent or even sceptical in the most part, reflecting the rhetorical enthusiasms but lack of positive EPI recognised by Jordan and Lenshow (2010). There may be a link to the fact that it is difficult to judge effectiveness (**Sheate et al, 2003**), so Government remains unconvinced as to how effective (and cost effective) EA tools are to decision-making (CLG, 2010b). That misses the possible wider picture of EA tools as platforms for helping to deliver wider accountability of policy and decision-making. But the enthusiasm of NGOs for EA has not waned and their determination to use EA in implementation for accountability reflects and follows up their efforts - as shown by this thesis - in influencing the legislation at EU and UK levels.

Where does this leave environmental policy integration and the environment? Is environmental protection strengthened by EA supporting sustainable development or weakened? As **Sheate (2003b)** argues, this depends on the prevailing conception of sustainable development - strong or weak - and 'weak' is the one that tends to hold sway. However, it is also crucially dependent on the efforts of NGOs and the public to push aspects of the natural environment, such as biodiversity and ecosystem services, in holding policy makers, decision-makers and proponents to account for actions that weaken (or fail to promote) such environmental protection. Prior to sustainable development being the predominant paradigm e.g. in the late 1980s/early 1990s, environmental integration as a policy principle didn't stop major road schemes, for example, decimating protected areas such as Twyford Down in Hampshire (Bryant, 1996). But then decision-making processes such as cost benefit analysis were less accountable, less transparent and more dominant, EIA was in its relative infancy and it was precisely the lack of accountability of the Government's road building programme that mobilised such opposition to major road schemes (see e.g. Sheate and Sullivan, 1993) and that helped to turn around Government policy in that area (Cowell and Owens, 2006).

Returning to the core research question: "*to what extent have EA processes, over the course of their evolution in the EU, provided a platform for enhancing accountability and sustainability?"* the previous sections have shown how accountability and sustainability are reflected in the legislation and implementation. Figure 3 illustrates schematically the relationship that emerges between changing governance and policy contexts, demands for increasing accountability and the way in which EA legislation has both responded to, and influenced, these changing contexts. This represents a policy-oriented model, and provides a basis for understanding the historical evolution of EA in the EU and for anticipating the potential future dynamics between the elements as EA legislation in the EU continues to evolve.

An immediate conclusion is that the evolution of the EA legislation in the EU (and its implementation) has reflected the changing policy paradigms, particularly the greater emphasis towards sustainable development and towards greater accountability (democratic and corporate) in EA decision-making, which in turn also reflect the shifting governance patterns in the EU over the 25 year period. But it is not a simple relationship, not least in terms of the negotiating positions held by Member States and often conflicting political aspirations, e.g. to reduce bureaucracy and burdens on business and authorities. In fact, it is often in implementation that these conflicting positions become uppermost, even after signatory and agreement to loftier ideals.

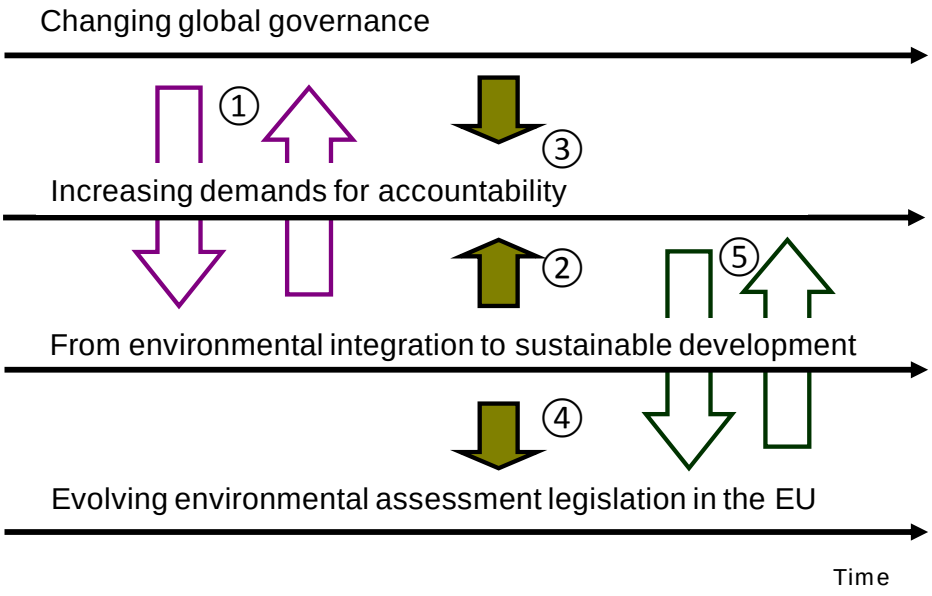


Figure 3: Changing relationships over time between the prevailing policy and governance contexts, EA legislation and accountability (see text below for explanation of ①-⑤)

Figure 3 above suggests significant iteration between the parallel trends of key policy and paradigm shifts discussed over the last 25 years of evolution of EA legislation in the EU. For example, changing global governance can be seen reflected in the increasing integration in Europe (EU integration, Lisbon Treaty); a move of powerful decision-making institutions further away from the local, e.g. rise of the World Trade Organisation, G20 Heads of State (①), which has helped shape the shift from environmental integration to sustainable development (e.g. through the role of the EU); and the increasing importance of international treaties in global and environmental matters. Increasing demands for accountability can be seen to stem directly from Rio and Aarhus (②) and include an increasingly significant role for NGOs in international treaties (e.g. in Espoo SEA protocol development and Aarhus implementation), as well as globalisation generally requiring greater transparency and accountability (③) of multi-national companies and international institutions where democratic control does not extend.

The body of work presented in this thesis demonstrates the gradual shift from environmental integration to sustainable development in the evolution of EA in the EU (④), but this trend is also reflected in the different legal bases for the EIA and SEA Directives (and in the Espoo Convention and SEA Protocol) and the way in which the EU and UNECE legislation have influenced each other (including Aarhus) (⑤). Conceptually, sustainable development strengthened arguments for greater accountability and a greater role for EA in accountability, given the demands under Principle 10 of Rio for an increase in emphasis on participation and engagement (i.e. less expert-driven than traditionally environmental integration and early EIA had been). However, it may have compounded problems in terms of environmental integration, given debates during the 1990s over exactly what was meant by sustainable development (Scrase and Sheate, 2002).

A typical trend in the EU is for consolidation of legislation, usually to provide for simplification where multiple Directives relate to similar activities, e.g. Integrated Pollution Prevention and Control (IPPC), Waste Framework Directives etc. The European Commission consulted during 2010 on revision of the EIA Directive and consolidation of the EIA and SEA Directives into one is a possibility, even if not immediately likely (Sheate et al, 2005; CEC, 2010). Another recurring trend might be seen to be streamlining of processes (often under the guise of rationalisation, reduction of bureaucracy or modernising), which could see the clawing back on the application of the EIA and SEA Directives to a narrower range of projects, plans and programmes and the shift to less accessible arenas for engagement (Cowell and Owens, 2006). However, what the model (in Figure 3) suggests is that as long as other trends continue, e.g. shifting global governance, increasing demands for accountability and the shift towards more sustainable development, it is difficult to see how these cannot continue to be reflected in EA legislation, and if they are not, they will still be significant drivers in this area, to the extent that the calls for increasing accountability will result in challenges to Government and bureaucracy for the right to participate and to seek justice. Indeed, efforts to streamline or curtail participation opportunities are likely to be challenged precisely because the right to participate has now been institutionalised, and as Aarhus principles are now being extended beyond Europe (UNEP, 2010; European Ecoforum, 2011). SEA shifts accountability earlier and to public officials and politicians to provide more vertical and higher accountability. A consequence of this higher accountability through SEA may be a tendency for central government to re-trench, i.e. seek to hold on to control, restrict scope for public and NGOs to hold them to account outside Parliament and an unwillingness to be open to other values or perspectives (**Sheate and Partidario, 2010**, Eales and Sheate, 2010; 2011). Hence we are seeing an increasing recourse to Aarhus in the courts over failure to consult properly (e.g. Sheate and Twigger-Ross, 2010). EA, properly conducted, could help avoid recourse to the courts through earlier opportunities for scrutiny and accountability: democratic (both bureaucratic and political), corporate (in the case of developers and EIA) and professional accountability, of consultants for example, who can also help deliver corporate accountability. Even while they are paid by the client, consultants ultimately may be held to account themselves e.g. at a public inquiry or in court.

5.2 Critical reflection and contribution of the thesis

Is accountability a distinct angle on EA? This thesis would seem to be the first attempt to view EU environmental assessment explicitly and in depth through the lens of accountability. It has emerged as a gap in the literature that appears difficult to fill when it needs evidence from real-life case studies best written by those involved in them, but who are least likely to write them. It is a policy and practice gap between the theoretical discussion in the EA community – the role and purpose of EA – and the practical and legal discussions around implementation.

The body of work, therefore, firstly provides a documented account of the evolution of EA legislation and policy over the 25 year period and an authoritative understanding of the underlying thinking behind the EIA and SEA Directives. Significantly it provides unique insights into the associated policy development process within Government and the EU, and particularly the role of NGOs in promoting accountability and sustainability in that policy evolution. Secondly, the work has also contributed to changes in EA legislation at EU and UK levels, and continuing policy development through work with and for NGOs, and through published policy-oriented research for EU and Member States' institutions. Finally, the thesis provides a unique perspective among scholars in this field, providing insights from NGO perspectives on the use of EA otherwise rarely documented. It is from this viewpoint that an accountability policy-oriented theory has been constructed, which provides a framework for a distinctive new area of EA research and analysis.

From the historical analysis presented by this thesis it is clear that EA has had an important role to play – at the legislative level - in providing the requirements for accountability, and, at least in the cases examined, at the implementation level as the lever that can be used to hold individuals, organisations and authorities to account for their actions. The fact that sometimes it occurs and sometimes it doesn't is accepted as undeniably true. That does not detract from EA's potential as a platform for accountability, nor from the fact that sometimes it can be used to good effect. The relationship with the shift to sustainability is a close one, since sustainable development demands greater public involvement in decision-making and greater accountability of executive decisions to the public. This is not to suggest that EA provides a panacea for delivering accountability, far from it, and it is unlikely to deliver accountability universally. Indeed, depending on the strength and maturity of the NGO sector EA may serve to 'legitimise' decisions instead of holding them to account. But in the cases examined (in practice and in policy) there is clear evidence that the EA process has been used by NGOs to secure better requirements for accountability and better practical implementation.

6. Conclusions and recommendations

The EIA and SEA Directives reflect the different influences prevailing upon them and, even though the EIA Directive was amended, it stills bears the hallmark of the legal basis on which it was originally justified, without the more central principle of the environment at the heart of the EC Treaty. While it is not surprising that the legislation reflects the changing policy and governance contexts of the time, it is instructive to understand that this is not by chance, but the result of a combination of influencing factors and actors. Not least among these is the role played by NGOs at the UK and EU levels in seeking to secure strong EA legislation that they could 'use' in practice – use to secure greater accountability in decision-making and push for more sustainable decisions and ultimately environmental outcomes. Neither should it be surprising that such efforts have not always been successful.

What might this say about the future? The EU legislation on EA is under review, and may eventually be consolidated, while at the same time the political climate seeks to reduce bureaucracy and speed up the planning process. While the latter may be one influence, other trends on accountability and sustainable development (such as internationalising Aarhus) continue and may be able to hold up against pressure to 'rationalise'. Effectiveness means different things to different people (Cashmore et al, 2010) and political leadership will continue to be important in how the environment is integrated into decision-making (**Sheate et al, 2003**). From an environmentalist perspective success is rarely measured in immediate results; campaigns are long-term, often decades in the delivery and incremental in achievement. Seeing EA in accountability terms may be important, not so much for evaluating effectiveness in an alternative way, but for encouraging policy makers to view EA differently. The historical tensions between the UK and EU perspectives on EA, recounted in this thesis, do not appear to have gone away; indeed, as this thesis reveals, there is a remarkable familiarity in current debates. Neither are those tensions likely to disappear in the near future, given the disagreements at the heart of the UK Coalition Government over attitudes to the EU and desires for deregulation in environmental matters.

Common failings in EA – e.g. poor quality, failure to address alternatives or cumulative effects, as documented in this thesis – need not necessarily mean that EA as a policy instrument is therefore consistently ineffective or inadequate, but that such quality issues can provide an important focus around which NGOs and the public can coalesce and through which they can hold proponents and decision-makers to account. EA – even poor quality EA that appears to change design or decisions little – may still provide a mechanism through which proponents and decision-makers can be held to account. An accountability perspective on EA has important links to deliberative models, not least because participation in EA procedures is essential if accountability is to be achieved, but it is essentially a pragmatic model. It does not rely, for example, on social learning or knowledge brokerage taking place; consensus, after all, is no longer a goal once accountability becomes an issue – accountability becomes

the goal. Clearly power relations (Richardson, 2005; Juntti et al, 2009) will have an influence on the extent to which NGOs and the public are able to hold proponents and decision-makers to account, but as the two EIA case studies illustrate (**Sheate, 1995b; 1996a**) power can be overturned or frustrated even when it resides with corporate interests or the executive.

From a public policy maker's perspective, especially where a more rationalist, instrumentalist view of EA may still hold sway, an accountability role for EA could help in re-framing the question of EA's influence on decisions and provide a more proactive purpose to inform EA policy, implementation and EU negotiations on changes to the EA Directives. It might not fit well with the deregulation agenda, but it would fit comfortably with at least some other prevailing public policy and governance drivers for greater openness and transparency, and potentially even with the localism agenda of the current UK Coalition Government (neighbourhood plans, for example, proposed by the Government, are likely to require SEA/SA). It might also encourage a more positive stance on the use, for example, of SEA at strategic levels (such as NPSs), where the approach to date has been widely recognised as pretty woeful (Ellis, 2010). Rather than being seen as purely procedural and informational to the decision-making process, EA could be seen as having a crucial role in improving accountability at all levels, particularly important in the new political era of 'localism' and all that that might entail for spatial planning.

Recommendations: a new research agenda

Emerging from this analysis and the nascent policy-oriented theory described, is a corresponding research agenda to explore this field of EA and accountability in more depth. This agenda for research seeks to make the links between the EA literature and the accountability literature more explicit, and should include the following priority areas:

- NGO influence on current reviews of EA Directives and forthcoming 7th Environmental Action Programme 2012/3 – ways in which EA will be framed and articulated there and internationally e.g. Rio 20 years on in 2012;
- Meta analyses of case law in which NGOs have been applicants / key players to understand when they resort to the courts to secure accountability, e.g. through ECJ and Member State case law and complaints to the European Commission, Ombudsman etc;
- More action research/ case studies (and historical archival research) written by or with NGOs active in EIA/SEA/SA cases – this would be ideal for CASE (collaborative) PhD studentships;
- Longitudinal research of EA campaigns by NGOs;
- Power relations among NGOs and developers/executive in EIA/SEA contexts, with a focus on questions of legitimacy of decision making and accountability of decision-makers;

- Accountability, EA and policy makers: how receptive might policy makers be to viewing EA through an accountability lens and how might this fit with other policy drivers for openness and transparency in the public and private sector?
- Accountability and localism – the role for EA in local level spatial planning;
- Accountability and effectiveness of EA, as part of the need for a plurality of approaches to evaluating effectiveness – can accountability be used as an additional metric for measuring effectiveness of assessment processes? What might be the criteria and how might they differ (if at all) for EIA and SEA?
- Accountability and EA – comparative analysis across EU Member States;
- Accountability and resources to participate – are there useful models for more actively supporting public/stakeholder engagement early in assessment processes?

What this thesis has sought to do is to focus a spotlight on an aspect of EA that has gone largely unnoticed in the diverse assessment literature, almost because it is taken as a given in EA folklore, i.e. that part of the purpose of EA is to increase accountability. Yet only with the in-depth understanding of the historical role of NGOs in EA policy development provided by this thesis, alongside reference to the governance literature on accountability, can these new insights into EA function be elucidated.

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Appendix 1

SHEATE, W.R., and Macrory, R.B. (1989) Agriculture and the EC Environmental Assessment Directive: Lessons for Community Policy Making. *Journal of Common Market Studies* Vol. 28: 68-81.

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The extent of **William Sheate's** contribution to the research article is evaluated according to the following scale:

A. has contributed to collaboration (0-33%).
B. has contributed significantly (34-66%).
C. has essentially performed this study independently or undertaken the majority of the work (67-100%).

Declaration for the individual elements	**Extent (A,B,C)**
1. Design of the project including formulation of problems to be tested and design of individual experiments.	B
2. Planning of experiments and design of methods to answer the problems posed under # 1 including choice and development of methods.	B
3. Involvement in analysis and data collection.	C
4. Presentation and interpretation and discussion of the results obtained in article form.	B

Other comments
William Sheate is the first and corresponding author of this article that presents work developed originally from his Masters thesis in 1984.

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[1] Co-authors are defined according to the Vancouver rules see http://www.icmje.org/index.html

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Agriculture and the EC Environmental Assessment Directive: Lessons for Community Policy-Making

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ABSTRACT

The 1985 EC Directive on Environmental Assessment introduces a common set of decision-making procedures throughout the Community for authorizing specified classes of land-use projects. During the development of the Directive, projects involving agricultural intensification received a high profile, but were marginalized in the final text, in no small part due to opposition by the United Kingdom. Even then, implementation of the Directive in the United Kingdom in respect of agriculture has proved peculiarly troublesome, not least because of presumptions firmly entrenched in the country's long-established land-use planning system. The history of the Directive and its effect in one country has wider implications for the future development of Community environmental policy, particularly in the light of current concerns to secure more effective policy integration in areas hitherto largely unaffected by such considerations.

INTRODUCTION

The EC Directive on environmental assessment represents a significant development in Community environmental policy. It is the first Directive that is concerned directly with the introduction of anticipatory decision-making procedures for a wide range of land-use related projects (Haigh, 1987) and its long period of gestation was due in no small part to this

distinctive nature. Member States were required to introduce the measures necessary to implement the Directive in July 1988, and this article explores the problems faced by the United Kingdom in respect of one class of projects covered by the Directive — those relating to agriculture.

The Directive introduces a set of decision-making procedures to ensure that consideration is given to the environmental implications of specified classes of projects before they are authorized to proceed. Those projects falling within Annex I must always be subject to the assessment procedures,[1] while those in Annex II need do so only if Member States determine that their characteristics so require. Eight particular types of project are listed under the broad heading 'Agriculture' in Annex II of the Directive (see Table 1). Environmental problems raised by all of the projects in this class are ultimately due to the intensification of agricultural and forestry practices, but most of them, such as pig-rearing installations and water management projects involve constructional and engineering works of a type familiar to British town and country planning controls. Two classes, however, stand out as being directly concerned with the productive cultivation of land itself: initial afforestation

Table 1

A Comparison between Annex II para. 1 of the Environmental Assessment Directive and Schedule 2 of the UK Town and Country Planning (Assessment of Environmental Effects) Regulations 1988, S.I. 1988/1199

Annex II Projects Subject to Article 4 (2)	Schedule 2 Descriptions of Development
1. Agriculture	Development for any of the following purposes:
(a) Projects for the restructuring of rural land holdings	1. Agriculture
(b) Projects for the use of uncultivated land or semi-natural areas for intensive agricultural purposes	(a) Water management for agriculture
(c) Water management projects for agriculture	(b) Poultry-rearing
(d) Initial afforestation where this may lead to adverse ecological changes and land reclamation for the purposes of conversion to another type of land use	(c) Pig-rearing
(e) Poultry-rearing installations	(d) Salmon hatchery
(f) Pig-rearing installations	(e) Installation for the rearing of salmon
(g) Salmon breeding	(f) Reclamation of land from the sea
(h) Reclamation of land from the sea	Forestry is covered by separate regulations.

[1] Art 2 (3) of the Directive permits exemptions of Annex I projects 'in exceptional cases'.

leading to adverse ecological changes, and projects for the use of uncultivated land or semi-natural areas for intensive agricultural purposes.[2] The term 'agricultural intensification', will be used in this article to describe this latter class, which forms the focus of analysis.

Concerns about the environmental effects of agricultural intensification were reflected in early drafts of the Directive, and received high profile during its political passage. Yet by the time the Directive was finally agreed by the Council of Ministers, the process of intergovernmental negotiation and compromise had relegated agriculture to one of the non-mandatory classes of project in Annex II of the Directive; and within the United Kingdom at any rate formal implementation of the Directive with respect to intensification has so far been studiously avoided by the UK government. We will argue that the way agriculture has been handled during the development of the Directive reflects significant underlying themes involved in Community policy-making, and that these issues have implications well beyond the subject of environmental assessment itself.

AGRICULTURE AS AN ISSUE DURING THE DEVELOPMENT OF THE DIRECTIVE

Agriculture consistently received a high profile during the development of the Directive. Since the early pronouncements by the Council of Ministers in 1975, initiating the development of the legislation, agricultural development, particularly of natural and semi-natural areas, was to be one of the most controversial subjects on the agenda. Early drafts from 1977 (Commission of the European Communities) required the following agricultural projects to be subjected to mandatory environmental assessment: major intensive livestock rearing; major drainage projects; major irrigation projects; major reparcelling schemes; major projects of reclamation of natural areas (e.g. forests, heath, wasteland, wetlands).

Strong opinions concerning agricultural intensification and environmental assessment were expressed by many interested parties throughout the development of the Directive. There were a number of reasons for this, not least because of the development of the two-list system of projects adopted from the Batelle Institute's consultative report for the European Commission (Batelle Institute, 1978). The two-list system of Batelle was more widely favoured on the Continent than in the UK, with Lee and Wood (1976) arguing very much against a list system and thresholds, preferring instead to lay down broad criteria for the selection of projects. But this approach was

[2]'Land reclamation for the purposes of conversion to another type of land-use' is also included within the afforestation category, and could be considered as a third example of a project solely concerned with use of land.

rejected, appearing to rest uneasily with more explicit and detailed drafting approaches favoured in Community legislation. As Table 2 illustrates, the decision to adopt a listings approach, and its inherent complexities, caused a

Table 2

Selection of Projects for Assessment

1976 Lee and Wood ENV/197/76	1977 EIE/0U/10	1979 EIE/OU/14	EIE/OU/18
No list system Projects subject to EIS determined by 'applicability' guidelines	List of projects subject to mandatory assessment. Criteria for selection of other projects	List of projects subject to mandatory assessment. Criteria for selection of other projects	List of projects subject to mandatory assessment (Annex I). List of projects (and modifications to Annex I projects) subject to assessment when so required according to criteria set by competent authority (Annex 2). Provision for simplified form of assessment. Screening criteria for selection of other projects
1980 COM (80) 313	1982 COM (82) 158	1983–5 85/337/EEC	
List of projects subject to mandatory assessent (Annex I). Provision for exemption and simplified assessment where appropriate. List of projects (and modifications to Annex I projects) subject to assessment when so required (Annex 2). Competent authority(ies) establish criteria and thresholds. Provision for determining other projects	As previous draft except more detailed provision for exemption	As before except detailed exemption clause (paragraph). Commission to report annually to Council on the application of the paragraph	

good deal of delay while trying to agree on which projects should be subject to either mandatory or non-mandatory assessment (Sheate, 1984).

By the time the European Commission first published the draft Directive in 1980 (Commission of the European Communities, 1980) the Batelle two-list system had been taken on board. Up until 1979 agricultural projects had been included in the mandatory assessment proposals, but by 1980 agricultural projects had been pushed to discretionary assessment in Annex II.

The European Parliament debate[3] in 1982 on the report from the EP Committee on the Environment, Public Health and Consumer Protection (European Parliament, 1982) drew attention to the potential and actual impacts of intensive agriculture upon the environment. Many UK Conservative MEPs were at odds with their own government on this issue, and when discussing tabled amendments to the Directive were particularly concerned with large-scale land reforms, projects for cultivating natural areas and abandoned land, water management projects and intensive livestock-rearing projects. Mr Johnson, for instance, believed that the time had come to have some form of better control over what happens in agriculture and argued, as did the Socialist Group (Earnshaw, 1988), for agricultural projects to be placed back into Annex I from which they had been removed by the Commission.

Mr Narjes (for the European Commission), in replying to the EP debate agreed with Parliament that agricultural projects should come within the scope of the Directive, but did not believe that all agricultural projects 'without exception should be subject to environmental impact assessment, on the grounds that, for very small projects, this would be regarded as pure bureaucratic chicanery'.[4] It would appear that the Commission was hedging its bets at this time since later drafts (and the final version) of the Directive included cut-off points (thresholds) for many Annex I projects, e.g. power stations greater than 300 megawatts. Agricultural projects could have been included in Annex I, subject to certain thresholds such as hectarage, but pressure from the UK in particular meant that the Directive would never have been accepted without the removal of agriculture from the Annex I list; justification of the Directive under Art. 100 of the Treaty of Rome (relating to harmonization) required unanimous agreement by the Council of Ministers. Agricultural projects were then placed firmly into the Annex II category. Once placed in Annex II, however, there was still much discussion, particularly in both UK Houses of Parliament, as to how agriculture could be included in an Environmental Impact Assessment (EIA) procedure.

During the development of the Directive, the UK government continually opposed its introduction, mainly on the grounds that the long-established system of development control under town and country planning legislation

[3]Debates of the European Parliament (1982), Environmental Impact of Certain Projects, 18.2.82, No 1–280, pp. 237–48.

[4]*Idem.*

was a more effective and sensitive method of assessing the environmental impacts of projects. Certainly the existing procedures permitted extensive examination of many types of industrial projects included in the Directive, but agriculture raised particular problems. Agriculture as an industry has long had a special role in the UK, as in most other countries. Historically, however, until the Agriculture Act 1947 there had been little substantive agricultural policy other than measures to encourage cheap food supplies for the industrial working population (Beresford, 1975). The 1947 Act resulted in a deficiency payment scheme to farmers and coincided with the Town and Country Planning Act 1947, which introduced comprehensive requirements for developers to obtain prior authorization for new land-use projects. The town and country planning controls apply only to those projects defined in law as 'development', and since the introduction of the system in 1947 the use of land for agriculture had been totally excluded from the statutory definition of development, and was therefore not subject to any authorization process.[5] Even those types of agricultural project involving building or engineering works, such as the carrying out of land drainage or the erection of pig-rearing units, had long received favoured treatment under subsidiary legislation which granted automatic planning permission for many classes of such development, thus avoiding the need for individual authorization.

There were, therefore, two mechanisms available which were designed to encourage post-war agricultural development and intensification — a subsidy system, and exemption from the normal planning controls. Both of these were conceived at a time when agriculture was not widely recognized as having any significant environmental impact.

By 1983, however, with agricultural projects now clarified and firmly in Annex II, the UK government felt able to accept the Directive. Initially the UK Department of the Environment assumed that when it came to implementation, the Annex II projects were wholly discretionary and therefore did not require any further procedures at this stage. In fact, the Directive requires Member States to inform the Commission (Art. 11 (2)) of 'criteria and/or thresholds adopted for the selection of projects' or 'the types of projects concerned' relating to Annex II. The UK government subsequently accepted this view, and developed criteria and thresholds for a number of the Annex II classes of projects. Even then, however, one of the most controversial aspects of agricultural development, the cultivation of semi-natural areas, has not yet been addressed (see Table 1).

The history of the Directive therefore shows a clear catalogue of opposition to bringing such activities as agricultural development under any additional form of planning control. Indeed, the apparent *volte face* by the government in November 1983 in finally accepting the Directive may well have been the result of their belief that the procedures would really affect only Annex I projects, which would be readily incorporated into existing control arrange-

[5]Town and Country Planning Act 1971, Section 22 (2) (e).

ments. Hence the decision to accept the Directive in toto whilst having no real intention of implementing Annex II (and therefore agricultural projects) at all. Sheate (1984) has suggested that the report by the House of Lords Select Committee (UK House of Lords, 1981a) may have been instrumental in sustaining the life of the Directive by forcing the government to withdraw its opposition, but while this had some bearing at the time, the government's initial view that Annex II projects were wholly discretionary, and therefore neutral in their effect on existing national procedures, may have been equally significant.

The debate on the Directive in the House of Lords (UK House of Lords, 1981b) also revealed the government's opinion with regard to legislation for environmental assessment of changes in agriculture and forestry. Lord Bellwin (*ibid.*, Cols 1340–1344), the only member of the Lords to speak against the Directive as a whole in the debate, stated that the government believed that insofar as it was desirable to assess the environmental implications of such changes, this was best done by voluntary arrangements; it was wrong to try to legislate for EIA in agriculture where such activities were currently outside statutory control. Again this illustrates the government's attitude to the Directive throughout its development: it was neither needed at all as far as the normal land-use planning system was concerned, since environmental impacts were believed to be adequately considered already, nor should planning control (in whatever form) extend to areas such as agriculture which were currently outside the system. This minimalistic approach was reinforced by a concurrent policy to streamline the planning system in an attempt to remove delays to development projects.

The Earl of Cranbrook (*ibid.*, Col 1314), a long-time proponent of the Directive and Chairman of the House of Lords Select Committee, assumed that appropriate thresholds would apply, involving criteria such as size, the sensitivity of the local environment, and its value in terms of conservation or landscape. This approach seems eminently sensible and indeed such guidelines were included in early drafts of the Directive as Annex III: Criteria for the selection of projects other than those in Annex I. Such criteria had been removed by the time the Commission first published the proposed Directive in 1980 (Commission of the European Communities, 1980). Even with agricultural projects firmly in Annex II, the Directive was being hailed by conservationists as a potentially useful tool in bringing agriculture under some limited form of planning control. The Countryside Commission, in evidence to the 1981 House of Commons Select Committee on European Legislation &c. (UK House of Commons, 1981) stated that 'the proposals [for the Directive] could be a powerful instrument for certain agricultural projects and developments which at present fall outside development control by the statutory planning system in this country and they are potentially an important counterbalance to the application of EC agricultural and forestry policies and grants, often made with little regard for

environmental aspects.' When it came to implementation of the Directive, the UK Department of the Environment (DoE) and the Ministry of Agriculture, Fisheries and Food (MAFF) in particular have chosen to remain silent on the subject of the cultivation of semi-natural areas.

The House of Lords debate (UK House of Lords, 1981b) on the Directive came at a very sensitive time since the Lords were also involved at that time in debating a key piece of government conservation legislation, the Wildlife and Countryside Bill.[6] The proposals in this Bill, many of which were directly concerned with avoiding environmental damage caused by agricultural practices, firmly rejected the adoption of command and control regulation in this area, and were based on a philosophy of voluntary persuasion, backed by financial incentives, as a means of changing attitudes. The timing of the discussion on the Directive meant that many of their Lordships were sensitized to the fact that agriculture could be environmentally damaging, and some were equally concerned about the extent and effect of any pressure brought by MAFF concerning the implementation of environmental assessment for agriculture. At the same time, the government's commitment to the approach enshrined in the Wildlife and Countryside Bill inhibited any change of policy concerning the position of agriculture in the Environmental Assessment Directive.

IMPLEMENTATION IN THE UNITED KINGDOM

There are essentially three main approaches to the implementation of the Environmental Assessment Directive with regard to agricultural projects in the UK. First, those projects involving constructional or engineering works (and therefore 'development' under town and country planning controls) which are likely to have a significant effect on the environment will require planning permission. For example, pig and poultry rearing installations above certain sizes are subject to full planning control procedures, adapted to include environmental assessment requirements.[7] Other agricultural activities which have now been brought under the Environmental Assessment procedure by this method now include salmon farming and water management improvement projects dealt with under separate regulations issued by the appropriate Departments (Scottish Office and MAFF respectively): environmental Assessment (Salmon Farming in Marine Waters) Regulations

[6]The Bill became the Wildlife and Countryside Act 1981 dealing, *inter alia*, with the designation of Sites of Special Scientific Interest.

[7]Under the General Development Order 1988, S.I. 1988/1813 permitted development rights still attach to a large number of agricultural buildings, many of which could potentially fall within Annex II of the Directive. Article 4 of the G.D.O. permits the Secretary of State or a local planning authority with his approval to withdraw the automatic grant of planning permission in any particular case. Presumably, this procedure could be employed to ensure the application of assessment procedures in specific cases covered by the G.D.O., but oddly no official guidance on this point has yet been given by the Department of the Environment.

1988 and Land Drainage Improvement Works (Assessment of Environmental Effects) Regulations 1988. The latter relate to all improvement works carried out by local authorities, water authorities and drainage boards.

The second approach has been to bring about implementation by linking the environmental assessment to a granting system. Where a granting system already exists, (e.g. for forestry), it is a relatively simple procedure to add on an environmental assessment component as a prerequisite to consideration for grant purposes. Anyone wishing to plant trees for forestry purposes is, it is assumed, only likely to do so with a Forestry Commission grant and will therefore have to go through the granting procedure. The Environmental Assessment (Afforestation) Regulations 1988 confine assessment to grant-aided projects, which include the woodland options under set-aside, by requiring entry into the Woodland Grants Scheme. Though it is conceivable that afforestation may occur without grant aid, and such a scheme could be highly damaging to the environment, this seems unlikely, considering the long-term economics of forestry, and is not a situation which MAFF envisages.

However, where no such mechanism exists (e.g. for the cultivation of semi-natural or uncultivated land and land reclamation leading to change of land use) there was no apparent way for the government to introduce assessment for such schemes without bringing part of agriculture under some form of new control system of a type unfamiliar to that sector. This has resulted in the third approach to implementation: 'do nothing'. Agricultural projects such as the cultivation of semi-natural areas have been effectively squeezed out by the nature of existing control procedures, by being covered neither by existing planning controls nor by grant aid procedures. As a result, implementation is especially problematical. The DoE circular (UK Department of the Environment, 1988) which accompanies the regulations, clearly recognizes in principle that intensive agricultural expansion and land reclamation can have serious impacts upon the environment, since it refers to sensitive habitats designated under the Ramsar Wetlands Convention and EC Birds' Directive (1979).[8] The regulations themselves, however, make no mention of such agricultural activities.

It may be possible that the government believes that existing policy is sufficient to be considered as implementing the Directive with respect to semi-natural or uncultivated land. In the House of Lords debate (UK House of Lords, 1981b) Lord Sandford felt that there were three strands of policy which affected agriculture that would meet the requirements of environmental assessment for agricultural projects. First, there was a general acceptance that there would be a statutory system of advance notification of certain agricultural improvements, afforestation and land drainage proposals in particular areas of sensitivity such as Sites of Special Scientific Interest (SSSIs), national parks and so on. Such procedures were to be introduced for

[8] *Official Journal of the EC* (1979), OJ No L103, 25.4.79, Directive on the Conservation of Wild Birds.

SSSIs in the Wildlife and Countryside Act 1981. Second, there was widespread support and acceptance from the government of the principle that the Agricultural Development and Advisory Service (ADAS) should have a wider role and embrace considerations to do with the conservation of wildlife and habitats, landscape conservation and public access. This is now manifested in the form of the Farming and Wildlife Advisory Group (FWAG). Third, agricultural grants would be applied in certain areas and in some circumstances in a context wider than that of mere food production, via the Wildlife and Countryside Act. Today, we also have Environmentally Sensitive Areas, the Farm Woodland Scheme and perhaps further scope through set-aside arrangements.

Lord Sandford concluded that these strands of policy would be sufficient for the UK government to demonstrate to the European Commission under Article 5 of the Directive that agricultural developments, land drainage developments and all other items in paragraph 1 of Annex II could continue to be excluded from control 'because we shall have devised positive, dynamic and water-tight arrangements of our own for complying with Article 4 — the article which calls for proper environmental assessment to be undertaken on such projects'.

Clearly, however, the government did not share Lord Sandford's view, since they have decided that such arrangements are not sufficient for land drainage, forestry, pig and poultry installations or salmon farming. It seemed unlikely that the administrative measures suggested by Lord Sandford could be considered proper assessments with respect to the Directive, since Article 4 makes it quite clear that assessment means assessment in accordance with Articles 5–10 of the Directive. These articles include public consultation and authorization requirements. As a result the government eventually implemented regulations for these types of developments. But if existing administrative measures were not sufficient to cope with projects such as land drainage, why are they still considered sufficient for the cultivation of semi-natural areas?

The most likely reason for the government's inaction over semi-natural land projects is a pragmatic one. Implementation of the Directive with respect to the other agricultural development areas is, as has been shown, relatively straightforward. This would not be the case with the use of uncultivated or semi-natural land or land-use conversion, which would require a major and controversial change in the existing controls over agriculture.

CONCLUSIONS — FUTURE DIRECTIONS

The Existing Policy Base

Community initiatives in the environmental field rarely exist in a complete

policy vacuum (von Moltke, 1983). If they are to secure acceptance, some account at least needs to be taken of existing practices and arrangements within Member States. But the story of the Environmental Assessment Directive shows that negotiation can be seriously inhibited where there exists in one country a long-established system of controls, dealing broadly with the same subject matter as Community proposals, yet perceived to be threatened by them. Being asked to realign a familiar way of handling a subject may prove more demanding for a country than introducing wholly innovative forms of controls. In this case, the process resulted in a somewhat exaggerated support of British town and country planning controls and their existing ability to ensure effective environmental assessment, resulting in an inevitable slowing down of the business of negotiation (Peachey and Macrory, 1983). The situation was not helped by the fact that one aspect of the Community proposal appeared to touch upon what might be described as the *Leitmotiv* of the British land-use planning system — the total exclusion of agricultural and forestry use from anticipatory land-use controls. This feature of the system had already given rise to political controversy within the country in recent years, and was a subject on which, at the time when the Directive was being negotiated, there were settled and non-negotiable institutional positions. Agreement by a Member State to Community proposals in such circumstances is unlikely without major compromise — in this case, the shifting of agricultural developments to Annex II of the Directive.

Implementation

Once a Directive is agreed, there follows the question of implementation within Member States and the method adopted for doing so. This raises questions both of general principles of EC law and of the interpretation of the specific provisions of the Directive in question. On the latter point, it is clear that following Council agreement to the Directive, it was the initial view of the UK government that it was not necessary to introduce a formal control framework for Annex II developments, but that decisions could be left to a later date to be made on a discretionary and case-by-case basis. This interpretation meant that the policy problem of formulating control procedures for agricultural intensification and afforestation would be avoided, and undoubtedly eased the reaching of agreement to the Directive. Later reappraisal of the meaning of the Directive, in the light of criticism by both the Commission and national environmental organizations, meant that new procedures had to be devised. Not surprisingly, those devised so far still do not affect the principle of exluding agricultural and forestry use from planning controls, though it remains in doubt whether the measures adopted are sufficient to satisfy the requirements of the Directive.

Implementation also raises the more general question concerning the

extent to which environmental Directives must be implemented within Member States in the form of legal measures. The Treaty definition of a Directive appears to leave considerable discretion: 'A Directive shall be binding as to the result to be achieved upon each Member State to which it should be addressed but shall leave to the national authorities the choice and form of methods'.[9] But since 1982, the European Court of Justice has developed principles in a well-known series of cases[10] which clearly indicate that obligations under Directives may require to be implemented within Member States in the form of national legislation, or similarly formal and transparent methods. These developments in pure legal principle are running alongside an increasing preoccupation of the European Commission to ensure that obligations under EC Directives are implemented in practice as well as in formal terms.[11] It is too early to predict how these two trends will affect the review of the measures taken to date to implement the provisions of the Environmental Assessment Directive in the United Kingdom. But in the future, Member States are likely to be more acutely conscious of the binding nature of EC policy instruments: underlying the process of negotiating new proposals will be the awareness that it will be increasingly difficult for individual countries to overlook or by-pass the implementation of agreed obligations, even if expressed in ambiguous language. This may well have the effect of making it more difficult in the future for Member States to reach agreement on potentially controversial proposals.

Integration of Environmental Policies

The Environmental Assessment Directive was initiated as an important element of the Community's Action Programmes on the Environment and it was the Directorate-General XI of the Commission (Environment, Consumer Safety, and Nuclear Safety) and Environment Ministers of Member States that played the lead role in negotiation. But it is clear that the obligations under the Directive have implications for areas falling outside the remit of conventional departmental interests — agricultural intensification is a prime example, being a subject which in the UK would be considered to fall primarily within the responsibility of the Ministry of Agriculture, Fisheries and Food, rather than the Department of the Enviroment, a distinction also reflected at Commission level with Directorate-General VI (Agriculture) having key concerns in this field. It is possible to paint an exaggerated picture of departmental rivalries competing for lead

[9]Article 189, Treaty of Rome.

[10]EC *v* Belgium (1982) 2 CMLR 622; Ec *v* Italy (1984) 1 CMLR 148; Ec *v* Kingdom of Netherlands (1982) ECR 1781.

[11]Council Resolution of 19 October 1987 on the continuation of the EC action programme on the environment (1987–92) specifically underlines 'the particular importance [the Council] attaches to the implementation of the Community legislation' (OJ c289/3).

roles in policy development and resentful of intrusions from other spheres of government interest. But such tensions do exist, and can be expected to influence the direction of negotiations.

We have already pointed out the difficulties caused to the United Kingdom by the inclusion of agricultural intensification within the remit of the Environmental Assessment Directive. It is arguable that the root cause of such intensification has been the guaranteed price system inherent to the Common Agricultural Policy (and the deficiency payment scheme in existence in the UK before joining the EC in 1972), and that changes in this area of policy will have more environmentally beneficial effects than anything contained in the Assessment Directive. From this perspective, the current range of CAP reforms, and especially the introduction of the set-aside incentive scheme for arable land[12] can be seen as a parallel and possibly more effective set of policy instruments for dealing with problems arising from agricultural development and intensification of semi-natural areas. Without economic incentives, the reclamation and intensification of such areas is likely to be reduced, especially as set-aside is most likely to result in marginal land being taken out of production. It is also arguable that since the removal of marginal land from production is unlikely in itself to result in the required fall in production, other mechanisms may have to be considered more actively. These might include the encouragement of less intensive and organic production methods. Overall, such policies would reduce the likely environmental impacts of agriculture to the lowest achievable level, and reduce the importance of environmental assessment procedures in this area.

A convincing case could therefore be made for resisting the introduction in the UK of formal procedures for environmental assessment of agricultural intensification projects on the grounds that the concurrent CAP reforms address the issue. The reasoning is, however, dependent on the momentum of the present initiatives being maintained. A counter-argument could suggest that were another change in direction in agricultural policy to recur at a later date, this is precisely the time when assessment procedures need to be already in place. In any event, it remains uncertain whether this pragmatic approach will satisfy current approaches towards the implementation of Directives. The difficulties in this case have arisen in part from the Directive being perceived to threaten well-established departmental responsibilities. The present commitment to secure more effective integration of environmental dimensions into policy areas hitherto largely unaffected by such concerns — now reflected in the Treaty of Rome itself as amended by the Single European Act — suggests that similar tensions can be expected to arise in the future.[13] Increasingly, the requirements contained in Com-

[12]Council Regulation (EC) 1094/88 of 25 April 1988, implemented in the UK by the Set-Aside Regulations S.I. 1988/1352.

[13]Article 130r of the Treaty of Rome provides, *inter alia*, that 'Environmental Protection requirements shall be a component of the Community's other policies.'

munity Directives are unlikely to respect traditional boundaries of environmental policy established by national administrative and legal arrangements.

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Appendix 2

SHEATE, W.R. (1992) Lobbying for Effective Environmental Assessment. *Long Range Planning* Vol. 25: 90-98.

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Lobbying for Effective Environmental Assessment

W. R. Sheate

Environmental Assessment (EA) is recognized by conservationists as a tool which provides probably the best basis for helping to secure environmentally sustainable development in the future. Its application beyond simple projects to plans, programmes, and policies is the logical progression for EA, and would bring improved public participation. The need to provide EA with a secure quality control framework within which to operate in the future, through the establishment of an overseeing agency, has now become all too apparent, and needs to be a central requirement of the revised EC Directive. The U.K. Government has often been hostile to EA in the past, and at best ambivalent, but persistent lobbying by environmental groups over recent years has helped maintain the momentum for improvements in the application and scope of the EA process.

The Council for the Protection of Rural England (CPRE) has long been involved in campaigning for more effective environmental assessment (EA) and better implementation of EC Directive 85/337/EEC. We were involved long before implementation in the U.K. in 1988 and have continued to press for improvements and the wider application of EA. The issue of EA illustrates well the role of the environmental lobbyist in securing improvements to environmental policy and legislation.

CPRE has been an active supporter of EA for many years. Throughout our history CPRE has been one of the driving forces behind the creation and maintenance of the town and country planning system we now have in England and Wales. We have seen the development of EA as complementary to the town and country planning system, not contradictory or unnecessary. For us EA has represented a constructive mechanism for achieving better decision making and greater public participation in that decision making process, and throughout other policy sectors.

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While the U.K. Government's approach to the draft Directive was initially hostile and then, at best, ambivalent, CPRE argued for a positive and constructive attitude. At each stage in the process of implementation we made detailed and constructive suggestions, and were closely involved with the Department of the Environment's working party on EA implementation. In our response to the Government's proposals for implementation of the Directive we were critical of the grudging and minimalist way in which it embarked on implementation in the U.K. However, we have been pleased to see a somewhat more positive approach to recent proposals to strengthen and extend the application of EA in the U.K., although disappointed that the Government's White Paper on the Environment (September 1990) was less than enthusiastic about extending EA and events since that time have done little to indicate a major long-term change of heart.

A number of developments since the implementation of the EA Directive in July 1988 are addressed below, highlighting how key principles inform a campaigning strategy and can result in tangible, practical improvements in procedures and legislation. Four key areas of CPRE's activity on EA are taken as illustration. The first is U.K. implementation of the European Community Directive; the second is the role of public participation and quality control in ensuring an effective environmental assessment process; the third considers two formal complaints made by CPRE to the European Commission against the U.K. Government; and the fourth addresses the future for EA, and in particular its application at the strategic decision-making levels of policies, plans, and programmes.

Application and implementation of EA in the U.K.

The EA Directive has been implemented in the U.K. through regulations (secondary legislation)

under s 2(2) of the European Communities Act 1972. This has required a series of regulations to implement the Directive in a number of policy sectors where different consent procedures operate, or where there are none in operation. The U.K. Government published a summary of the requirements of the various regulations and procedures in the form of a booklet 'Environmental Assessment: A Guide to the Procedures'.[1]

The majority of projects requiring mandatory EA (Annex I projects) and discretionary EA (Annex II projects) fall under the town and country planning system and generally require planning permission. The exceptions are the major transport infrastructure projects which either require the consent of the Secretary of State for Transport or are promulgated as public, private, or hybrid bills and therefore require Parliamentary approval; or projects requiring the consent of the relevant Secretary of State (which often includes deemed planning consent), such as energy projects.

CPRE made a detailed submission on these regulations in response to the U.K. Government's original consultation on implementation.[2] Most of the Regulations came into force on 15 July 1988. Regrettably, many of our concerns remain, not least that effective implementation of the Directive had been difficult where no consent procedure exists. Where there is a requirement for planning permission, e.g. for most forms of 'built' development implementation has been more straightforward.

While implementation under s2(2) of the European Communities Act 1972 allows compliance with EC Directive 85/337/EEC, it provides no scope for further development of Environmental Assessment within the U.K. beyond a strict interpretation of the requirements of the EC legislation. Regulations under s2(2) of the EC Act allow implementation only of the strict letter of the parent Directive.

To *extend* the scope of EA, the benefits of which the Directive clearly signals in Article 13, primary legislation is required. CPRE argued, during the passage of the Environmental Protection Bill 1990 and the Planning and Compensation Bill 1991 that the Secretary of State should take powers to provide the opportunity to extend the scope of EA and to allow the flexibility necessary to implement the *spirit* of the Directive, even where the Directive itself has omissions or is, at times, ambiguous.

In April 1991 the Government finally accepted, after two years of intensive lobbying by CPRE, the need for primary legislation for EA and included it in the Planning and Compensation Act 1991.[3] Section 15 of the Act now allows the Secretary of State to make regulations for the purposes of requiring EA for projects other than those already listed in Annex I or II of the EA Directive. The lack of this provision until now has meant that certain projects have slipped through the EA net, e.g. potable water treatment plants, trout farms, and the requirement for some others is at best ambiguous, e.g. wind farms, golf courses, etc.

CPRE is now pressing Government to make these new regulations as soon as possible and to consider how any project likely to have significant effects on the environment can be subject to EA. The ultimate test, that of having significant effects on the environment, is the basis on which the Directive itself is based, and an issue which has been taken up by the European Commission in its recent infringement proceedings against the U.K.[4]

Slipping through the net

The implementation of EA undoubtedly needs to be extended if certain types of projects are not to continue to slip through the net. The potential for this is also clear in the context of incomplete implementation of the Directive with respect to certain types of development. The most obvious of these relate to agriculture and forestry, largely because the Government chose the Town and Country Planning system as the prime means of implementing the Directive, i.e. it has tied the EA requirement to an existing consent process. Consequently, where there is no obvious consent process —and agriculture and forestry are the most obvious examples—there has been little or no implementation for certain types of development, e.g. the cultivation of semi-natural land or land reclamation for the purposes of conversion to another type of land use. Indeed, these categories of the Directive do not even appear in the U.K. implementing regulations. Arguments that there are few if any projects occurring which are likely to have significant effects on the environment, especially in the present climate of extensification and set-aside, ignore the potential for future changes in agricultural policy direction. In the case of forestry, EA can only be required where grant aid is applied for, the Government having implemented the EA requirement by using the closest analogy to a consent procedure it could find, even though this is not a proper consent system. This anomaly has long been identified[5] and the European Commission has now recognized the Government's failure to implement the Directive fully in, *inter alia,* forestry and agriculture in its recent article 169 infringement action.[6]

While strict criteria or thresholds have been produced for Annex I projects, those for Annex II are purely for guidance, and have no legal force. The use of criteria and thresholds in the determination of which projects shall be subject to EA is a difficult issue and one which needs to be treated with considerable care. Superficially thresholds may appear attractive offering, as the Government has argued, a degree of certainty to developers and authorities alike. However, as CPRE has argued[7] and as the European Commission has pointed out in

its article 169 letter, thresholds should only used where it can be guaranteed that projects falling under the threshold will not have a significant effect on the environment. Even though thresholds used in Government guidance are indicative they are more often interpreted as being fixed. This could open up a local authority to the possibility of judicial review if it fails to require an EA for a project which, even though it fell below the thresholds, was still likely to have significant effects on the environment. Many forms of agricultural development come under permitted development and are therefore exempt from the need for consent. There is no obvious way in which such developments are routinely screened by competent authorities to decide which ones should be subject to EA.

The same problem is also very evident in the Netherlands where, although they have a very effective quality control and review system for projects that are subject to EA, thresholds are set very high so that a large number of projects having significant effects fall through the net.

With EA now in primary legislation in the U.K. there is at least a greater opportunity for correcting anomalies and inconsistencies as they come to light. But it will require a problem to arise before it can be dealt with: at the moment the Government appears reluctant to use its newly-acquired powers in a more preventive way.

Public Participation and Quality Control

A first glance at the EC Directive on Environmental Assessment (85/337/EEC) might suggest that the earliest opportunity for public participation in the environmental assessment (EA) process is on the publication of the information supplied to the competent authority (the 'environmental statement' in the U.K.). But that would be to misunderstand totally the purpose and process of EA.[8]

The principle underlying EA generally is to consider the environmental effects of a proposal—be it project, plan, programme or policy—at the earliest possible opportunity in the planning process:

> '. . . whereas they [EC Member States] affirm the need to take effects on the environment into account at the earliest possible stage in all technical planning and decision-making processes . . .'
>
> Preamble to EC Directive 85/337/EEC

Such an objective cannot realistically be achieved without first consulting those people who are most likely to be affected by a particular proposal. They will be the people who will know their own local environment and will be able to identify key areas of concern. Those concerns and fears may, in some cases, prove to be ill-founded, but if they are not identified at the earliest possible opportunity, they may arise at a much later stage when they are more likely to lead to conflict. By involving the public as early as possible issues may be identified which 'experts' might not have considered important, but which could prove to have a degree of importance out of all proportion to the magnitude of the impact.

So, while the legislation lays down minimum requirements for public consultation, particularly in relation to the documentation stage—in the U.K. the 'environmental statement' (ES)—no developer or authority should consider that that degree of consultation alone is sufficient. If they do they may be in for a rude awakening. Nothing irritates the public more than proposals which are sprung on them, with the first anyone knowing about a proposal being when a planning application is made and an environmental statement is published. Figure 1 illustrates the opportunities for early consultation.

As more experience of EA is gained it is becoming increasingly obvious that while the current Directive covers only projects, the principle of EA is best operated at *all* levels of the decision-making process, as highlighted in the preamble to the Directive quoted above. EA should be like the proverbial Russian doll, EA at each level nestling within the next, from the project level upwards and from policies down.

The European Community is now in the process of pursuing the principle underlying the EA Directive. It has always been its intention that EA of projects was the first step, while being the only step at the time which could be justified under the Treaty of Rome. The Single European Act now means that environmental legislation has a legitimacy of its own which it did not have previously, and therefore makes it possible to proceed with the next stage of EA—the application of EA to strategic decision making. This should be widely welcomed, not only because it means that the environmental effects of such proposals will be considered much earlier, but also because of the opportunities it presents for the public to have access to information and to feel that they have an input into the planning and decision-making process. Nowhere would this be better exemplified than in relation to road proposals, where the competent authority is also the proponent, be it the Department of Transport for trunk roads and motorways or the local highways authority for local roads. The lack of independent scrutiny of such proposals has further heightened the conflict between road proponents and the public.

Broad Oak Reservoir

More recently we have begun to see some developers and consultants recognizing the value of early consultation and adequate scoping. One example, Broad Oak Reservoir in Kent, illustrates the value

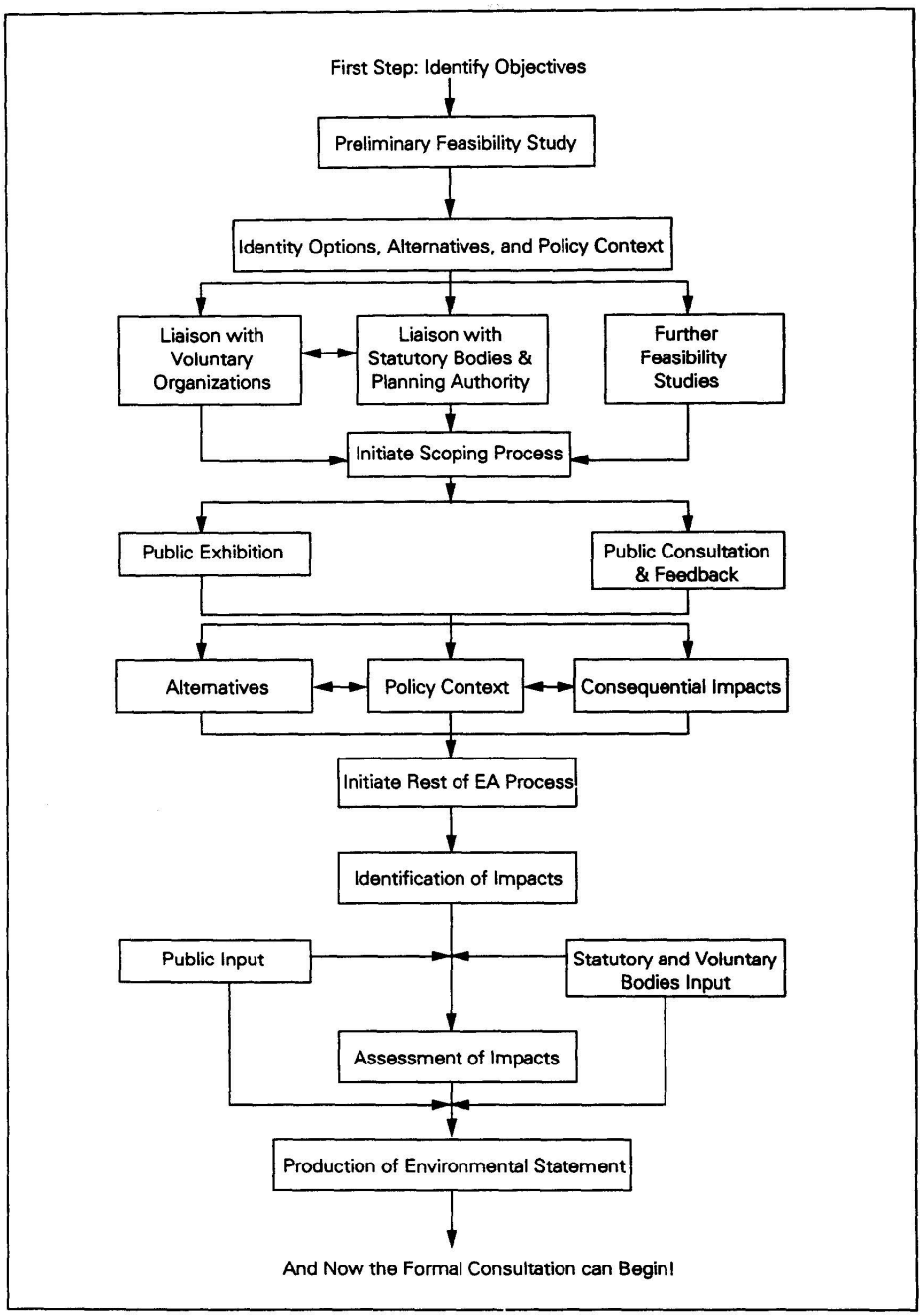

Figure 1. The scope for public involvement prior to providing the 'environment statement'

of publishing a scoping document at the earliest opportunity, which identified the key issues to be addressed and invited comments as to whether the scope as identified was adequate. The scope of the early environmental assessment quite properly widened out to encompass the range of options and potential impacts of meeting the objective of supplying water in Kent. This included options other than just supply options, particularly those of demand management. This scoping document was followed six months later by an 'Issues and Options' document which provided an assessment of the relative merits and impacts of the various options and combinations of options. After a further period of consultation the Steering Committee of the water companies decided to pursue the reservoir option (and other supply options), though rejected the view of many consultees of addressing demand

management first. Unfortunately having decided to press ahead with the reservoir proposal the 'Terms of Reference' document (for the EA), published almost a year after the initial scoping document, was not distributed to consultees in the same open way as the previous documents. The effect on consultees was noticeable, not so much because of the decision to press ahead with the reservoir, but because the latest documentation had been given such a restricted circulation. The willingness to consult appeared to have evaporated. Nevertheless, the early consultation process had occurred prior to the production of any ES, it had addressed the majority of key issues and was constructive and relatively conflict-free. Had the process been followed through fully, the decision over which options would have been most appropriate might have been rather different. Indeed, as far as many were concerned, the EA process had clearly identified demand management as the way forward in the first instance, rather than immediate new sources of supply.

This example also illustrates the difficulties of identifying the boundaries between projects, programmes, plans, and policies: what started out as a project became more of a plan once effective scoping had been carried out. Ultimately, the success or otherwise of early consultation as part of a broad EA depends on the willingness of the developer to see EA and all that it entails as a positive process for identifying the most environmentally sensitive way of meeting the objectives. If it is seen purely as a public relations exercise to justify decisions already taken it will soon become apparent to all concerned.

Quality control

After 4 years of operation of the Directive in the U.K., the need for a statutory body or agency, appointed to monitor and oversee the EA process, is becoming ever more clear. A number of studies[9] have revealed that the majority of ESs are inadequate. Individual competent authorities have had little guidance from central Government (though some is intended), often have little experience of the EA process and may be inconsistent in their application of the procedures where other considerations may appear to outweigh the potential environmental impact. Over and above this there is the inconsistent implementation between different policy sectors which is the basis for much of the EC's recent intervention.

Such a statutory monitoring agency may be a new body or an existing one appointed to carry out the necessary functions, and clearly would depend on the existing administrative circumstance in individual Member States. It should be able to offer guidance on EA methods and practice and on the content of the documentation; and review such assessments and keep a register of all requests and decision on EA. It should be a resource for developers, local authorities and the public. It need not review all ESs, but its key function should be to require competent authorities to comply with the legislation, and therefore it must be able to intervene in the case of disputes. Various models exist elsewhere in the world which may be worth considering, e.g. the Canadian Environmental Assessment Agency, Netherlands EIA Commission. CPRE campaigned vigorously for just such a body throughout the passage of the Environmental Protection Bill 1990 and the Planning and Compensation Bill 1991, but the Government has always rejected such proposals. With the likelihood of legislation coming forward (from which ever party is in power) within the next year or two to establish a new Environment Agency in England and Wales it is possible that such a body might be the natural home for such an over-arching Office of Environmental Assessment, overseeing EA throughout and across all Government departments.

Using the Directive

Environmental assessments often fall short of the ideal because of a lack of attention to the 'scoping' process, i.e. the way in which the parameters of the EA are determined. This should include identification of the various national, regional and local policies, and indeed international obligations, within which the proposal should be seen. It should also determine the relevant alternatives, be they alternative projects, processes or options, which will need to be addressed by the EA. The public, as we have seen, has a vital role to play in the scoping process and a good environmental statement (ES) will indicate the ways in which the public have been involved. In response to the generally poor quality of ESs, CPRE published in November 1990 a pamphlet[10] providing guidance on producing a good ES.

Defining the parameters of the project inevitably results in difficulties of defining 'project'. When is a project a project and when is it a 'programme' or even a 'plan'? Just such an issue is the subject of two formal complaints by CPRE to the European Commission which are described below: the first concerning a power station on Teesside,[11] the second concerning the methods used by the Department of Transport in assessing road proposals.[12]

Case studies—Complaints to the EC

(A) Combined Heat and Power Plant, Wilton, Teesside. A complaint was made by CPRE in April 1991 against the U.K. Secretary of State for Energy concerning the Environmental Assessment carried out for the 1725 MW gas-fired combined heat and power (CHP) station at Wilton, Teesside, proposed by Teesside Power Limited (TPL)—a consortium including Enron Corporation, ICI and four regional electricity companies. The concern

was that consent was given for this station, in November 1990, without the full environmental effects of the proposal having been properly considered.

The power station falls under Annex I of the EC Directive and therefore required a mandatory EA. However, the overall project involves, in addition to the building of the power station, four other components:

- ☆ a new natural gas pipeline,
- ☆ a gas reception and processing facility,
- ☆ a CHP fuel pipeline from the processing facility to the CHP facility,
- ☆ new overhead power transmission lines and system upgrades.

Consent for the power station was given by the Secretary of State for Energy on 5 November 1990, on the basis of the information provided in the Environmental Statement for the project. The Environmental Statement did not include a description of assessments of the effects of the associated power transmission lines, the gas pipeline, the processing facility or the CHP fuel pipeline. While separate environmental assessments are required for these developments, the environmental effects of the associated developments should, according to CPRE, have been considered under the Environmental Assessment for the power station.

The complaint argued that the Secretary of State did not see fit to require further information on these aspects, as he is entitled to do under U.K. implementing legislation (Regulation 10 of The Electricity and Pipe-line Works (Assessment of Environmental Effects) Regulations 1990, SI no. 442).

Teesside Power Limited therefore successfully received consent for the power station when the major impacts on the environment of the electricity transmission lines, the gas pipeline, the gas processing facility and the CHP pipeline did not feature in the accompanying documentation provided to the Secretary of State for Energy. Since the relevant information was not available to the Secretary of State—nor did he request such information—his decision may not have been the same had all the relevant information been available to him.

The Directive requires, under article 3 and Annex III, an environmental impact assessment to identify, describe and assess, where appropriate, the direct, indirect and secondary effects of a project on the environment. This information is required, where it is appropriate and relevant to the proposed project, to be provided to the competent authority —in this case, the Secretary of State for Energy— before a decision on consent is taken.

CPRE questioned whether the Secretary of State had all the necessary information before him when coming to his decision to grant consent for the power station. The Environment Statement for the power station makes it clear that separate consent and environmental assessment procedures would be followed, by other companies, for the other aspects of the project, i.e. the transmission lines, the pipelines and the processing facilities. This piecemeal approach militates against a proper assessment of the environmental impact of the development of the power station, and in CPRE's view clearly contravenes the Directive's requirements that *all* direct, indirect and secondary effects of a project should be addressed, where appropriate.

The environmental effects of the transmission lines and other consequential developments associated with the power station should, we argued, have been addressed as part of the Environmental Assessment for the power station itself. Not to do so devalues the EA of the main project and the effectiveness of the EA Directive itself. The Secretary of State for Energy should have required further information, including information of the likely significant effects on the environment of the associated development of transmission lines, pipelines and processing facilities, before taking a decision and granting consent for the power station.

(B) Department of Transport Methods of Environmental Assessment. CPRE registered a complaint against the U.K. Secretary of State for Transport in September 1991 concerning the implementation of the EC Directive on Environmental Assessment (85/337/EEC) with respect to road proposals.

In a detailed submission CPRE argued that U.K. implementation of Environmental Assessment (EA) for roads fails to comply with the requirements of the EA Directive. In particular, that the Departmental guidance on EA—the Manual of Environmental Appraisal (1983) and the Departmental Standard on Environmental Assessment (HD 18/88)—is inadequate, out of date, and fails to incorporate fundamental requirements of the EA Directive.

The key concerns were:

- ☆ the inadequacy and limitation of the 'framework' approach used by the Department of Transport in presenting environmental information, with its over-emphasis on user groups and policies likely to be affected by the road rather than on the wider environment;
- ☆ the indequate definition of 'project' which results in the splitting of proposed routes into small sections for consent and assessment purposes, without a strategic assessment of the whole proposal. Linked to this is the failure to require proper assessment of indirect, secondary and other effects, as required under article 3 and Annex III of the Directive; and

☆ failure to require information on forecasting methods as required under Annex III (4) of the Directive, to enable the approach to assessing magnitude and significance of potential environmental effects to be transparent.

The European Commission was requested to investigate the complaint that the Secretary of State for Transport has failed to establish sufficient procedures, methodologies, or criteria for assessing the effects on the environment of road proposals to comply with the EA Directive (85/337/EEC) in full. The procedures and guidance followed by Member States in implementing the Directive are as important as the relevant legislation, to the extent that even if the legislation appears to comply with the Directive, in *practice* the Member State may be in breach of its requirements. The U.K. Department of Transport is currently revising and re-writing its Manual of Environmental Appraisal.

Policies, Plans and Programmes—The Future for EA

Proper environmental scrutiny of proposals at the policy, plan and programme stage will be required to enable the EA system to work to the full advantage of all concerned. As we have seen, it is a logical preamble to project assessment if the issues which are properly the concern of policies, plans and programmes are fully assessed at an earlier stage. CPRE, for instance, pressed the U.K. Government during the Environmental Protection Bill 1990 to carry out an EA on the national plan for implementing the EC's Large Combustion Plants (LCP) Directive (88/609/EEC). Such a national plan for environmental protection would be a very useful starting point for applying EA more widely to other plans and programmes (see below). We are now pressing the case during discussions at the European level on the EC initiative to extend EA to policies, plans, and programmes.

There could, for instance, be considerable benefits from the application of EA to local authority forwards plans, such as Structure, Local, and Unitary Development Plans in the U.K. Applying EA to plans should help resolve many of the environmental problems which might become evident when an individual development project is examined. Formulating effective development plan policies should reduce the number of controversial and damaging applications later on in the planning process. It would also improve public discussion over environmental impacts by seeking to expose problems and difficulties before individual developments are even suggested. In the long term this would reduce public conflict over development and reduce the impact of development on the environment.

EA at the forward planning level would enable the environmental implications of separate policies to be married, e.g. policies regarding office development and housing development, where the latter is often driven by the former, but housing provision often has greater impact on the environment. Furthermore, strategic environmental assessment would allow the most appropriate policy options to be chosen, for instance, with regard to housing provision. All options for new housing development should be examined, including new settlements, urban regeneration, and peripheral expansion, and the least environmentally damaging mix of options chosen for a given area. Choices made at the development plan level would allow EA at the project level to be more focused on the impacts on the local environment.

Three further examples of where EA at strategic decision levels is urgently needed are described below.

Energy Sector

(a) *Flue Gas Desulphurization.* A good example of how the environmental assessment process is applied at too late a stage in the decision-making process is to be found with Flue Gas Desulphurization (FGD). The two main FGD processes available for reducing sulphur dioxide (SO_2) emissions from coal-fired power stations have quite different impacts on the environment. The limestone-gypsum process is generally more environmentally damaging than the regenerative process, such as Wellman–Lord. The former requires large quantities of extracted limestone which might come not only from National Parks, but also from other important landscape areas, including Areas of Outstanding Natural Beauty and many non-designated areas.

However, the problem is much wider than just the issue of extraction. The consequential impacts of extraction, particularly involving transport of materials, whether by road or rail, could have very significant impacts in the particular areas concerned, often, for instance, where roads are already congested. In addition, the disposal of waste gypsum —and there will always be contaminated waste gypsum to be disposed of, even if a proportion of clean gypsum can be used in wall board manufacture—will have transport impacts and wider environmental impacts resulting from the need for land-fill and the possible leaching of contaminants. The swamping of the gypsum market could also have long-term impacts on the viability of the limestone-gypsum FGD process. Similar arguments could be employed in relation to sulphuric acid and sulphur compounds produced as by-products of the regenerative process, though it uses comparatively small quantities of sodium sulphite solution as raw material.

Unfortunately, there is no evidence to suggest that the relative environmental impacts of the alternative

FGD processes have yet been taken into account in the U.K. Environmental statements produced by one of the electricity generators, PowerGen, for instance, for proposed FGD plants at the coal-fired stations of Ferrybridge and Ratcliffe-on-Soar, make *no* mention of the alternative regenerative process. Regenerative processes have not even been considered, let alone dismissed. The limestone-gypsum process has been chosen without wider environmental considerations in mind.

A proper EA, even at the project level, should include a full assessment of alternatives, with the final choice of process being made as a result of the EA process. But even so, such an EA could have no bearing on the choice of technologies for other FGD installations or, indeed, the overall role of FGD within an SO_2 reduction strategy. Neither would it be able to take adequate account of the impact that a particular FGD installation might have on the relevant by-product markets; that requires adequate information to be available about decisions being made regarding *all* other FGD installations.

This highlights the problem only too well: that an environmental assessment at the project level alone is actually inadequate. The EAs that have been carried out for existing FGD proposals to date have, to compound matters further, been far from adequate in their own right. An EA is clearly needed on the whole national plan for the reduction of air emissions (drawn up under Integrated Pollution Control as part of the Environmental Protection Act 1990 to comply with the EC Large Combustion Plants Directive, 88/609/EEC) in order to identify first the role of FGD in an SO_2 reduction strategy, and second, the most appropriate choice of technologies or processes for a particular FGD site. The project EA could then be more focused on the environmental impacts associated with that particular installation.

(b) *Renewable Energy Targets.* Another example would be the application of the principles of environmental assessment to energy policies, plans, and programmes. This will help to ensure that a clear assessment is made of the *total* environmental effects of different demand and supply options, in the light of other technical, political, and economic priorities and constraints.

In the context of a number of recent supply-side proposals (notably Sizewell B and Hinkley C), CPRE has argued that assessment of the environmental effects of a proposed power station should be integral to the promoter's economic analysis. Two considerations in particular should be given priority. The first is the basic principle of environmental assessment that 'the best environmental policy consists in preventing the creation of pollution or nuisance at source, rather than subsequently trying to counteract their effects' (EC Directive, 85/337/EEC). The second is that, where mitigation at source cannot be achieved, consideration should be given to the likely effects of alternative ways of achieving the same objective or objectives.

The advantages of renewables over other supply options do not render them unequivocally 'good' in environmental terms. There must be a consistent assessment of the environmental advantages and disadvantages of alternative energy policy options.

The best environmental approach would be for the Government to apply the principles of environmental assessment, first of all to energy policy overall, so that the role of renewables alongside e.g. energy conservation, could be determined, followed by an EA of the current 1000 MW target (plan) for renewables, to identify the environmental effects of different ways of meeting this target. There may be a case for increasing this target, but the larger the target, the greater the need for comprehensive environmental assessment of the different renewable energy options that could be used to meet it.

Roads programme

The current roads programmes, as laid out in the Government's programme 'Trunk Roads England, Into the 1990s' (1990), is driven by the over-riding imperative of building more roads as the solution to transport and congestion problems. This fundamental difficulty could be tackled by applying the principles of EA to the whole roads programme, preferably once those principles had been applied to *transport* policy as a whole. EA at such levels would then enable the options and mix of options to be identified and modified which achieved the objectives with the least damaging impact on the environment.

Three key issues, at least, need to be addressed in the context of policy and programme assessment: emissions (e.g. 20 per cent of CO_2 emissions arise from road traffic); aggregates (e.g. road construction accounts for a third of all aggregate demand); and land-use (e.g. the potential for consequential development attracted by the road development). All three need to be minimized in meeting objectives. That will involve recognition that new roads also contribute to the generation of extra demand, i.e. extra CO_2 emissions, additional development, etc. Within the roads programme alone an EA at the programme level should result in a greater emphasis on traffic management as an alternative to always building more roads. The role of roads in overall transport policy would also be influenced by EA at the policy level.

Conclusions

A recent initiative by the U.K. Government in publishing a report 'Policy Appraisal and the Environment'[13] highlights the conceptual difficulties governments may face in taking on board the

environment wholeheartedly in the decision-making process. 'Appraisal' is in danger of being seen in some quarters as an alternative to Environmental Assessment. But they are not one and the same thing. Appraisal would appear to be much more about identifying the impacts of a particular policy or proposal, so that those impacts are known (taken into account), but do not necessarily result in any modification of the proposal, e.g. the use of the term 'appraisal' in the Department of Transport's Manual of Environmental Appraisal is indicative. Environmental Assessment is a much more iterative process, and therefore should be applied at the earliest opportunity, from the very start of the planning and design process. As impacts are identified, these are fed back into the design so that impacts can be minimized or removed. EA is much more likely to result in changes to the original proposal, and should have looked at alternative ways of achieving the original objective. Appraisal is more about identifying the costs and impacts of a particular option that has already been chosen, than about choosing an option which has the least impact.

It is vitally important that Environmental Assessment is seen as the best way of incorporating the environment into the decision-making process, rather than appraisal. Semantics apart, the chances of achieving an environmentally sustainable future through the application of appraisal rather than EA are likely to be considerably less.

The EC's five-year review of the EA Directive (in progress) provides the opportunity for the Commission to come forward with amendments to the Directive including, for example, requiring each Member State to appoint or nominate a body or authority to oversee the EA process. Only with adequate and *consistent* quality control will the whole EA process be effective. Such a body would also provide the long-term resource and expertise on which to build strategic EA for plans, programmes, and policies. This single change to the Directive could transform its potential effectiveness. Add to that a new or amended Directive covering strategic EA and there could be the basis for securing policies and actions which really begin to be environmentally sustainable.

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Appendix 3

SHEATE, W.R., and Atkinson, N.R. (1995) Public Participation in Environmental Decision-making: the European Dimension. *Environmental Policy and Practice* Vol. 5: 119-129.

Statement of authorship[1]

This statement of authorship covers the following research article:

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.

The extent of **William Sheate's** contribution to the research article is evaluated according to the following scale:

A. has contributed to collaboration (0-33%).
B. has contributed significantly (34-66%).
C. has essentially performed this study independently or undertaken the majority of the work (67-100%).

Declaration for the individual elements	**Extent (A,B,C)**
1. Design of the project including formulation of problems to be tested and design of individual experiments.	B
2. Planning of experiments and design of methods to answer the problems posed under # 1 including choice and development of methods.	B
3. Involvement in analysis and data collection.	B
4. Presentation and interpretation and discussion of the results obtained in article form.	B

Other comments
William Sheate is the first and corresponding author of this joint article.

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2/11/10	Nicola Atkinson	MS	

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[1] Co-authors are defined according to the Vancouver rules see http://www.icmje.org/index.html

Public Participation in Environmental Decision Making: The European Dimension

W. R. Sheate and N. R. Atkinson

Recent international commitments provide an added impetus and context for the development of improved public participation in environmental decision-making. In Europe, environmental impact assessment (EIA) is now – ten years since first agreed – well established. Lessons from the experience of EIA provide some useful insights as to how to ensure effective public participation in the newer EC instruments of access to information, environmental management and auditing, and eco-labelling. The key to successful public participation lies in achieving an appropriate balance between early opportunities for involvement in decision-making and access to justice when things go awry: a question of providing both prevention and cure.

INTRODUCTION

In recent years, the importance of public participation in environmental decision-making has been given added impetus by the outcome of the Rio de Janeiro Earth Summit (United Nations Conference on Environment and Development – UNCED) in June 1992. It formed, for example, two of the key 27 Principles of the Rio Declaration:

> Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.
>
> (Principle 10)

> Indigenous people and their communities, and other local communities, have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognise and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development.
>
> (Principle 22)

Perhaps more significant is the weight given to public and community participation in the accompanying Agenda 21– an 800-page plan which, though not legally binding on signatories, is a clear statement of intent for achieving sustainable development.

Agenda 21 addresses the issues of environment and development in considerable detail. Section III is of most importance for public participation and provides the crucial levers for encouraging countries in transition, such as many Central and Eastern European states, and developing countries, to open up their decision-making processes. That does not mean that Western democracies have nothing to learn from Agenda 21 when it comes to improving the involvement of citizens in environmental decision-making.

At the end of 1992 the Council of the European Communities passed a resolution accepting the Fifth Action Programme on the Environment and Sustainable Development (known as 'Towards Sustainability'). The Fifth Action Programme is seen as the Community's programme for implementing commitments made at the Earth Summit in Rio de Janeiro in June 1992. Chapter 3 (The Actors) and Chapter 7 (Broadening the Range of Instruments) set out clear principles for public participation in EC decision-making, including the important roles of the general public and NGOs in influencing policies and decisions (Chapter 3.3) and public awareness and education (Chapter 7.5), e.g. public access to environmental information.

This belief that better decision-making will flow from involving the public in the process is central to environmental impact assessment (EIA). A host of other instruments are now emerging based on the same principle but which seek to extend the scope of the information to which the public has access. As a result, the information which may be available under the EC schemes now goes beyond simply information relating to a development or site to include information generally held by public authorities as well as information relating to companies' environmental performance and their products. In each case, information provision is intended to improve environmental performance either by facilitating decision-making or enforcement and to be structured such that companies are given an incentive to participate.

A study of the operation and effectiveness of these instruments follows below, with particular regard to the role of the public in the process of decision making. It is possible to draw certain conclusions from experience with EIA about the conditions necessary for effective public participation which will be useful if the newer instruments are to reach their full potential.

THE EIA DIRECTIVE 85/337/EEC

The European Community (EC) Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment,[1] was agreed and notified to Member States in July 1985. Formal compliance was due on 3 July 1988. The Directive is a procedural one, which seeks to ensure that before a decision is made about whether consent should be given to go ahead with a development a minimum level of information about the likely significant effects on the environment has been provided to the 'competent authority' (for example, a local authority or government minister) making the decision. It does not in itself require a Member State to refuse to give consent for a project even if it is likely to be highly damaging to the environment. It should, however, ensure that decisions are taken with full knowledge of the environmental implications of the proposal. In principle, the Directive applies equally across all policy sectors by providing a framework within which Member States must act.

Projects likely to have significant effects on the environment by virtue *inter alia* of their nature, size or location must be made subject to an assessment of their effects before consent is given. There are two lists of projects: Annex I projects require environmental impact assessment (EIA) in **all** cases and include major chemical works, power stations, motorways etc.; Annex II projects must be subject to assessment where Member States consider they are likely to have a significant effect on the environment. Annex II covers the majority of development projects subject to various criteria and thresholds according to the individual Member State. The direct and indirect effects of the proposed project on the following four factors must be identified, described and assessed, where appropriate:

- human beings, fauna and flora;
- soil, water, air, climate and the landscape;
- the interaction between the first two groups;
- material assets and the cultural heritage.

Information supplied by the developer and gathered as a result of consultations must be taken into account in the decision-making process. Although the Directive studiously avoids reference to a formal impact statement, such a document is mentioned in the implementing legislation of many Member States. The developer must supply a minimum level of information and may supply additional information where appropriate. The minimum information is:

- a description of the project with information on site, design and size;
- the data required to identify and assess the main effects which the project is likely to have on the environment;
- a description of the measures envisaged to avoid, reduce and possibly remedy significant adverse effects;
- a non-technical summary of the above information.

1. OJ (1985) L175, pp 40-48, 5.7.85.

Annex III provides further guidance on information to be supplied, including where appropriate an outline of the main alternatives studied and the reasons for the developer's choice. The description of effects should consider direct effects and any 'indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the project'.

The public must be consulted before the project is initiated (Article 6(2)). However, there has been some confusion here since Article 8 requires information gathered pursuant to Articles 5, 6 and 7 to be taken into consideration in the development consent procedure. That would imply that the public must be consulted before *consent* is given, not just before the project is *initiated*. Any request for development consent and the information supplied by the developer must also be made public. There are also arrangements for consulting other Member States where a project is likely to have transboundary impacts. The decision and reasons must also be made public.

EC Member States have implemented broadly similar measures, or adapted existing procedures, for public consultation so that the public is given an opportunity to comment on the environmental information at the time or soon after it is submitted to the competent authority, and generally before a decision is reached.[2] In the UK, the public is consulted on the environmental statement at the time the planning application (or equivalent) is made to the competent authority. There is no formal requirement for earlier consultation or participation, although this may happen on a voluntary basis. Once an application accompanied by an ES has been made there is normally a 16-week period in which the local authority (in the case of planning applications) must make a decision. A public inquiry may be held depending on the level and nature of objections. In the Netherlands, detailed provision is made for public consultation at two stages in the process: first, at the establishment of the EIA guidelines (scoping) and second, when the EIS is evaluated. A public hearing takes place at this second stage with no restrictions on 'the public concerned'. Most Member States do not provide for such an early stage of public participation. Ireland unusually has provision for right of appeal to the national planning board by third parties.

Five-year review

The Directive required the European Commission to publish a report for consideration by the European Parliament and the Council on the application and effectiveness of the Directive after five years from notification. This five-year review report was due in July 1990, but was only published in April 1993.[3] This was due to delays in implementation, but also as a result of delays within the Commission and the need to gather Member States' comments on the draft report.

The review produced a useful snapshot of implementation throughout the Community as of 1991. Particularly interesting were the comparisons of Member States' use of criteria

2. Commission of the European Communities (1993) COM (93) 28, 2.4.1993: Report from the Commission of the Implementation of Directive 85/337/EEC.
3. CEC (1993) *ibid.*

and thresholds and systems for quality control of documentation (environmental statements).[4] The report identified where a number of improvements should be made. It concluded that the EIA process is, in many cases, not starting early enough. It is often bolted on to the planning and design process rather than being integral from the beginning. The report concluded that there is often inadequate quality control of the environmental statement and the EIA process as a whole. Adequate mitigation measures are frequently missing from the planning and design of projects. Consultation in some cases and in some Member States is weak and the availability of environmental statements is sometimes poor. The review also concluded that the contribution of the EIA process to decision-making and the role of monitoring project implementation are not as clear or as effective as they could be. This last point is particularly disturbing, since EIA is essentially about improving the quality of decision-making by making it more informed.

The review, unfortunately, did not address what is probably the greatest weakness of the present EIA Directive: that it applies only to project level decision-making, thereby occurring only after crucial policy decisions have been made or development programmes decided. The report did, however, recognise that it had not addressed this key aspect of EIA.

Amendments proposed by the European Commission

The Commission has proposed a number of key changes to improve the effectiveness of the Directive.[5] These include: the scope of the application of the Directive (screening); the content of the EIA study (scoping); improvements to the exchange of information and the decision-making process; and measures to implement the Espoo Convention on transboundary impacts.[6] The proposals also include new screening criteria for Annex II projects, additions to the Annex lists and other minor changes.

The amendments proposed by the Commission have been based on the findings of the five-year review report. However, in many ways they represent a minimalist approach to improving the present Directive inevitably representing the lowest common denominator to which the Commission believes Member States will agree. It is disappointing, though unsurprising, that the opportunity has not been taken by the Commission to take forward the implementation of EIA in the Community and extend its application in line with the Fifth Environment Action Programme. Already we are seeing efforts by some Member States to weaken the Commission's proposed amendments and possibly even the existing Directive. The UK Government has already indicated that it will oppose any extension of the EIA process, e.g. scoping or post-project monitoring.

4. See Sheate, W.R. (1994) *Making an Impact: A Guide to EIA Law and Policy*, Cameron May, London.
5. Commission of the European Communities (1994) COM (93) 575 final, 16.3.1994, Proposed Directive for amending Directive 85/337/EEC.
6. UNECE (1991) *Espoo Convention on Environmental Impact Assessment in a Transboundary Context.*

Scoping

Environmental impact assessments often fall short of the ideal because of a lack of attention to the 'scoping' process, i.e. the way in which the parameters of the EIA are determined. This should include the identification of the various national, regional and local policies, and indeed international obligations, within which the proposal should be seen. It should also determine the relevant alternatives, be they alternative projects, processes or options, which will need to be addressed by the EIA. The public has a vital role to play in this scoping process and a good environmental statement (ES) will indicate the ways in which the public has been involved. In this way the public can *participate* in the process, not simply be *consulted* on its outcome.

There has been considerable concern that the wording of Article 5 of the EIA Directive has resulted in EIAs including only the minimum specified information rather than the information identified in Annex III to be included where appropriate. The Commission proposes to introduce the concept of scoping, so that the competent authority will define in consultation with the developer and other authorities the scope of the information to be considered in the EIA, including that relating to alternatives. The proposed amendments include strengthening the Annex III requirement to consider alternatives so that a description of the main alternatives which might be envisaged can be required. Clarification of the definition of alternatives is needed to ensure it includes reasonable alternative options and/or processes and not just locations.

The scoping proposal is to be welcomed (so far as it goes) since experience has shown that where scoping is carried out, particularly in an open and accessible way, there can be advantages to the developer, the competent authority and the public in ensuring that key issues are addressed and not left until it is too late allowing unnecessary conflicts to arise. This proposal ensures that the discretion as to the issues to be addressed rests with the Member State competent authority rather than with the developer as arguably has been the case hitherto. However, the scoping proposal currently fails to give the public any opportunity to have an input into the process, which is critical to the success of any scoping process.

Exchange of information and decision-making

The Commission's proposals for clarifying the provision and exchange of information (new Article 5(3) and Article 6(1)) are to be welcomed. The latter will ensure that environmental authorities are properly consulted on the information supplied, not just on the request for development consent. New Article 6(2) is also to be welcomed, since this will clarify the current confusion over consulting the public so that this occurs 'before development consent is granted' rather than before the project is initiated.

The Commission proposes to amend Article 8 so that it strengthens the consideration given to the *opinions* as well as the *information* gathered pursuant to Articles 5, 6 and 7 in the development consent procedure in order to ensure that the EIA process is properly informing decision-making. The Commission also proposes to clarify the type of information to be published when a decision on consent has been taken (Article 9), including reasons for granting or not granting

consent despite unfavourable opinions gathered during the consultation stage. These changes will help in ensuring that the information gathered pursuant to the EIA process is taken into account in the decision-making process and that clear justification for the decision is provided. However, in replacing Article 9 with a new Article 9 the sentence 'The detailed arrangements for such information shall be determined by Member States' has been omitted. This is crucial and should be reinstated since otherwise there is no indication as to what publication of the consent decision means: how is it published and where?

While the Commission's proposals will certainly bring about some significant improvements in the EIA Directive, if agreed by the European Parliament and the Council, there are a number of other improvements particularly relevant to public involvement which would bring added benefit.

Definition of 'project'

The Commission has chosen not to propose any clarification to the definition of 'project'. This has been the basis for many complaints to the Commission and action in the European Court concerning transport and other infrastructure (such as electricity generation) schemes, specifically over whether a larger project can be split up into smaller schemes for the purpose of applying the EIA Directive.[7] One of the consequences of this is to frustrate effective public participation since the assessment and decision-making process is severely constrained. The public is prevented from having an opportunity to raise crucial issues such as need or before irreversible decisions are taken. All too often, the public is faced with a *fait accompli* where consent has already been granted for related schemes. The Commission could usefully take this opportunity to clarify that a project means the overall project including associated developments, not simply the smallest component into which the project can be broken down. It should be remembered that the whole *raison d'etre* behind the Directive is that

> ... effects on the environment [should be taken] into account at the earliest possible stage in all the technical planning and decision-making processes ...[8]

This admirable sentiment cannot be achieved if EIA is applied only at the *latest* stage, e.g. individual schemes of a larger road project or upgrading of an entire route; or for overhead power lines after the decision to locate a power station has been made without any consideration of the power line implications.

Post-project monitoring

In early drafts (during 1993) of the Commission's proposed amendments there was a new provision to ensure that post-project (or post-implementation) monitoring occurred. This does not appear in the proposed amendments and the Commission is committed only to studying the costs and benefits of such a provision. Yet, the Commission's own five-year review of the Directive made it clear that post-project monitoring and evaluation are crucial to ensuring an effective EIA system. It is difficult to equate these two positions. EIA implementation could be greatly helped by an amendment to Article 9 along the lines originally considered by the Commission:

> Member States shall adopt the measures necessary to ensure that the effects arising from the implementation of the project will be monitored and that the results of the monitoring and the appropriate measures proposed by the competent authority to reduce or offset any significant adverse environmental effects revealed are made available to the public concerned and where appropriate to Member States likely to be affected.[9]

The public availability of monitoring information is critical to the feedback process since the public and NGOs can play an important role in alerting the relevant authorities/agencies to deficiencies in the implementation of a project and in lobbying for future changes.

The Commission's proposals, if agreed, would bring about welcome improvements to the Directive. However, they clearly represent the victory of political expediency over what is desirable in environmental terms.[10] The proposed amendments do little to move forward commitments to sustainable development in the Fifth Environmental Action Programme or in Agenda 21.[11] Unfortunately, even the success of the Commission's comparatively modest proposals is far from guaranteed, given the level of scepticism of some Member States towards EC legislation, continuing debates over subsidiarity, and the deregulatory efforts of those wishing to reduce all burdens on industry. Yet environmental constraints on industry and individuals are inherent in the concept of sustainable development. Providing effective mechanisms, such as EIA, for managing this is essential to turn those commitments into something more than rhetoric.

RECENT DEVELOPMENTS

The Freedom of Access to Information Directive

Pressure for the more comprehensive provision of information began building in the European Union just as the EIA Directive came into force. It was not until the Fourth Action Programme (1987–1992) however that a formal call was made for 'a Community law on the freedom of access to information on the environment'. Directive 90/313 on Freedom of Access to Information on the Environment was unani-

7. See Sheate, W. R. (1995) Electricity Generation and Transmission: A case study of problematic EIA implementation in the UK, *Environmental Policy & Practice*, 5 (1).
8. Preamble to Directive 85/337/EEC.
9. Commission working document, 20.9.93.
10. See Sheate (1994) *op cit.*
11. Efforts by the Commission to take forward strategic environmental assessment (SEA) legislation in the form of a separate SEA Directive are beginning to re-surface (having previously been aborted) (see CEC (1995), Proposal for a Directive on SEA, Commission draft, 16.5.95) but, given the level of hostility to even minor amendments to the current project EIA Directive, there would seem to be little prospect of such legislation coming to fruition in the immediate future.

mously agreed in 1990.[12] Member States were required to implement its provisions by 31 December 1992. According to its Preamble, the Directive was adopted to improve environmental protection and to remove the differences between Member States which can create 'inequalities within the Community and different conditions of competition'.

The Directive gives any legal or natural person the right to request information from any public body with responsibilities relating to the environment subject to certain exceptions. There is no need to show an interest nor any requirement that the individual be a Community national. A response to the request must be made within two months and may require a certain charge to be met provided it does not exceed a reasonable cost.

'Information relating to the environment' and 'public body with responsibilities relating to the environment' are terms which are defined under Article 2(a). According to the Directive, the former means:

> any *available* information in written, visual, aural or data-based form on the state of water, air, soil, fauna, flora, land and natural sites and on activities (including those which give rise to nuisances such as noise) or measures adversely affecting or likely so to affect these and on activities or measures designed to protect these, including administrative measures and environmental management programmes. (emphasis added)

Whilst the precise scope of this definition remains unclear, some commentators have opined that 'It is difficult to see any aspect of the environment which is excluded from this definition'.[13] It is likely for example that it includes information beyond the Community such that information 'relating to the export of products or equipment is within the ambit of this provision in the same way as information on the ozone layer, the climate or tropical forests' would be covered.

The public bodies from whom such information may be requested are also defined widely in the same article to mean:

> any public administration at national, regional or local level with responsibilities and possessing information relating to the environment with the exception of bodies acting in a judicial or legislative capacity.

Included would seem to be any government body whether or not environmental issues are the main focus of its responsibilities. Article 6 goes on to extend the right of access to information held by 'bodies with public responsibilities for the environment and under the control of public authorities'. The purpose of this provision, according to Kramer, is to ensure that the 'right of access to information should not be affected by a delegation of responsibility by a public authority to other bodies'. Hence, research institutes and public companies would be included.

The Directive provides that even if the information sought does fall within the definition and the request is made to a relevant public body, it may still be refused provided that reasons are given and that the refusal is based on one of the reasons permitted in the Directive. Under Article 3(3), the reasons include that the document is unfinished; that it is an internal communication; that the request is 'manifestly unreasonable' and that it has been formulated in too general a manner. The wording of this provision makes it clear that a Member State may not require an authority to refuse a request on these grounds but may allow it to do so in its discretion.

In addition, there are a number of formal grounds on which a request may be refused. These are found in Article 3(2) which together with those mentioned above are exhaustive. A Member State may not go further to limit access to information. On the other hand, Article 3 gives Member States a discretion as to whether to allow authorities to refuse to give information on the grounds specified. In these cases, Member States may define these exemptions as either mandatory or discretionary. They include the confidentiality of proceedings; the fact that information requested is *sub judice* or under enquiry; commercial or industrial confidentiality; and that the provision of the information would have a counterproductive effect. Again, the precise meanings of these terms (especially the last which was added by Council amendment) are not defined further in the Directive.

Under the Directive, the authority must respond to the request as soon as possible or at least within two months and give reasons in the case of a refusal. In that event or where there has been an 'inadequate' response, Article 4 gives the applicant a right to 'seek a judicial or administrative review of the decision in accordance with the relevant national legal system'.

Review

Implementation of the Directive has already been somewhat problematic and whilst no action has yet been taken in the European Court of Justice, a number of formal complaints have been made by non-governmental organisations in respect of countries such as Belgium, Ireland, Spain and the UK. The main problem area identified concerns the scope of the exceptions, the uncertainty of which has been highlighted above. Of particular concern is the meaning of 'commercial and industrial confidentiality including intellectual property' and the circumstances in which information supplied voluntarily by a company or other third party is protected.

The second concern is the extent to which public bodies are covered which in the first instance is a matter for the Member States. The UK, for example, in its Guidance Document which accompanies the implementing regulations has not stipulated which bodies are covered although in an earlier draft, more than 200 bodies were listed.[14] Its provisions do not, however, cover the work of the Community institutions which are the subject of other initiatives. Many directives, for

12. OJ L158/56, 23.6.90, and see Bakkenist, G. (1994) *Environmental Information: Law Policy and Experience.* Cameron May.
13. Kramer, L. (1992) *Focus on European Environmental Law.* Sweet and Maxwell.
14. The reality, in the UK for example, is that some bodies are denying they are relevant bodies under the Directive, e.g. UK Nirex Ltd regarding information on alternative sites for a deep repository for radioactive waste (see correspondence between the National Steering Committee of Nuclear Free Local Authorities and UK Nirex Ltd, from 28 September 1995).

example, impose obligations on the Commission to draw up and publish a report on the implementation of that measure.[15]

The last area of contention concerns the practical arrangements under which access is secured. Article 3(1) places the onus on Member States to 'define the practical arrangements under which the information is *effectively* made available'. How this is to be achieved is not prescribed and indeed, there is nothing to stop Member States from delegating the task to more local levels. Another aspect of this issue is the costs imposed on a person making a request which has already proved problematic. Failure to ensure consistency in these areas, particularly this last, is bound to compromise the stated objectives of the Directive to remove disparities between Member States. In the meantime, it increases the likelihood of some enforcement action being taken at either a national or European level.

The Eco-Management and Audit Scheme

Environmental auditing emerged in the 1980s as a tool for companies wishing to ensure compliance with a plethora of legislative requirements in the United States. As such, it was seen by companies primarily as an internal management tool which according to the International Chamber of Commerce (1980) comprised:

> a systematic, documented, periodic and objective evaluation of the performance of the organisation, management systems and equipment designed to protect the environment with the aim of:
>
> (i) facilitating management control of the environmental practices;
> (ii) assessing compliance with company policies including observance of existing regulatory requirements.

More recently, the audit has come to be seen as a means by which the public may be informed about the performance of a company. It is this aspect of the environmental audit which has particularly aroused the interest of the European Union, culminating in the adoption of Regulation 1836/93 allowing voluntary participation by companies in the industrial sector in a Community Eco-Management and Audit Scheme (EMAS) in July 1993.

Although originally planned to be mandatory, participation in the scheme by companies is voluntary and open to industrial facilities. It was formally launched in April 1995. According to its preamble, the Regulation is based on a recognition of industry's 'responsibility to manage the environmental impact of its activities' which therefore 'requires a proactive approach in this field'. Article 1 defines the objective of the scheme to be:

> to promote continuous improvements in the environmental performance of industrial activities by:
>
> (a) the establishment and implementation of environmental policies, programmes and management systems by companies in relation to their sites;
> (b) systematic, objective and periodic evaluation of the performance of such elements;
> (c) the provision of information on environmental performance to the public.

To facilitate these objectives, the scheme sets out the requirements to be met by those wishing to be registered to the scheme. In particular, they must establish an environmental management system which will ensure continuous environmental improvement consisting of a policy, objectives and targets, procedures, records and a manual. A regular audit of the system must be carried out either by an internal or external auditor. The system – and an environmental statement (ES) summarising the results of the audit – must be verified by an external verifier.

Environmental Statement

Article 5 of the Regulation states that the ES must cover certain matters which include the presentation of the company's policy and management system, assessment of the 'significant environmental issues of relevance to the activities concerned', a summary of figures such as waste generation and energy consumption and 'other factors regarding environmental performance'. It is also stated that the ES must be 'designed for the public and written in a concise comprehensible form'. It should also be non-technical although technical material may be appended. Apart from this provision, the Regulation provides no guidance on the form or content of the Statement.[16] Generally, an ES will be prepared every three years but in the meantime companies will have to produce simplified annual statements except in limited circumstances such as where the verifier thinks that it is unnecessary.

Whilst a copy of the statement must then be given to the competent body and kept at the disposal of the public, at the earlier stage the Regulation contains no obligation on the applicant to consult with the public in its preparation. Nor is there yet any guidance to the verifiers on what they should require in the ES beyond that found in the Regulation. Again, it is anticipated that this will be dealt with to some extent in the accreditation criteria currently being developed in each of the Member States as is already the case in France, the Netherlands and Denmark.

Another matter which may yet need to be dealt with in such guidance is the arrangements for making the ES public which will be considered sufficient for compliance with the Regulation. This may be a decision that has to be taken either by the verifier or the competent body. The incentive element of the scheme may go far to encourage companies to facilitate access but there may be circumstances in which this is not the case.

Also important in relation to EMAS is the extent to which access may be obtained by third parties to information beyond that included in the ES. The spectre of public access to damaging audit reports has been one of the main impediments to greater use of these tools in the highly litigious United States. The Regulation deals with this question to

15. See Directive 91/692 OJ 1991 L 377/48.

16. It is unfortunate that the terminology under EMAS, specifically the use of the term 'environmental statement', provides opportunity for confusion in the eyes of the public viz a viz its common usage within EIA.

some extent in Article 4(7) which states that 'external auditors and accredited environmental verifiers shall not divulge, without authorization from the company management, any information or data obtained in the course of their auditing or verification activities'. Beyond this requirement, the matter is likely to be decided by national rules relating to the disclosure or 'discovery' of information during the judicial process.

Verification

Once the ES has been so verified or 'validated' and other information set out in Annex V has been supplied, the competent body cannot refuse to register the company. Annex I describes what is required for verification in more detail which in some cases specifically requires communication with the public. The policy for example must be based on certain principles which include provision of information to the public and open dialogue. In addition, the management system must be designed to ensure staff awareness of relevant matters and that there are procedures in place so that the company can respond to enquiries from 'relevant interested parties' (which include both employees and non-employees) on the company's environmental effects and management. What exactly will be sufficient for the purposes of certification or verification is not yet clear.

Under the Regulation, the process of verification is to be carried out by externally accredited verifiers. The accreditation arrangements are the responsibility of Member States and the subject of oversight by the Commission. In the UK, for example, the task has fallen to UKAS (UK Accreditation Service, formerly the NAACB). In other countries such as France, it might be a government department. The Regulation does not require a public register of verifiers to be maintained although some Member States such as the UK will do so in any case.

The standards of competence to be met by verifiers and verification methodology are defined by the national accreditation bodies. The Regulation does not require that the public be given any input into the development of those standards nor is their content prescribed such that verifiers are required to take into account the public interest. In addition, decisions as to what is a 'significant environmental effect' for example will be very important in setting the scope of the scheme but in the first instance such decisions under the Regulation are for the company and then the verifier to determine. Public pressure of course may be imposed at the later stage once the information has been published, should the public have sufficient information to understand what has been excluded.

Site registration and deregistration

Registration follows confirmation of verification by the verifier and will mean that the site is then entered on a register. In addition, the Commission is obliged to publish a list of the registered sites in the Community each year in the *Official Journal*.

Article 8 deals with the process of registration. Notably, it fails to include any provision giving the competent body power to require further information in the ES once it has been accepted by the verifier. Nor is there any provision for the competent body to question the information or to refuse it on any other basis such as objection from any regulator. There is no obligation to consult the public before registration is granted.

There are limited circumstances under which a company may be removed from the registration list which are also contained in Article 8. This may occur where for example a statement is not provided within a certain period of time, where the company is no longer in compliance with the Regulation or with relevant environmental legislation. The exact circumstances in which this final situation may arise are not defined further in the Regulation. Is it necessary for example that proceedings have been begun or that a conviction has been secured? In what circumstances, if at all, will a private prosecution which is possible in the UK for example warrant deregistration? Deregistration is not possible in all circumstances however, such as where an ES was later found to be incomplete or false.[17]

Eco-labelling

Information relating to the environmental soundness of particular products is often made available voluntarily by companies as part of their advertising campaigns. On the one hand, disclosure of such information is considered to be in the public interest where it facilitates consumer choice. As such, it also represents a means of affording some leverage to those companies whose products are more environmentally friendly. On the other hand, there have been growing concerns in recent years that companies may use such information to mislead the public.

This is the basis of the EC's Eco-labelling scheme which was adopted in 1992 by Regulation 880/92 of 23 March 1992.[18] It is intended to provide consumers with an 'authoritative, independent assessment of environment performance which indicates relative performance' assuming that 'unlike other aspects of product performance, people cannot measure environmental performance for themselves'. The extent to which the scheme actually involves the public however is limited.

The Regulation established a voluntary scheme which is intended ultimately to provide a common basis for the assessment of the environmental probity of products. Its preamble refers to the increased public interest in information about products with reduced environmental impacts, the existence of several Member State schemes and the need to 'highlight more benign alternatives and therefore provide consumers and users with guidance ...' It goes on to state that the aims of the Regulation are to establish uniform criteria for an award scheme and to create conditions for 'ultimately establishing an effective single environmental label for the Community'. Article 1 of the Regulation further states that it is intended to:

- promote the design, production, marketing and use of products which have a reduced environmental impact during their entire life cycle; and
- provide consumers with better information on the environmental impact of products

17. ENDS, August 1995.
18. OJ L99/1, 11.4.92.

without however compromising product or workers' safety or significantly affecting the properties which make a product fit for use.

Broadly, the Regulation establishes a system in which certain criteria are to be developed and agreed within the Community against which applications for the eco label will then be assessed. Decisions regarding the definition of each product group and agreement on the criteria for that group are to be made at the Community level. Decisions regarding the grant of the award are made at the national level. The successful applicant is then entitled to use an emblem in particular circumstances which assures consumers at the point of purchase about the environmental impacts of that product.

Criteria development

The development of the criteria for each product group against which the application is assessed is determined according to Article 5 of the Regulation. Product groups are defined according to their functional equivalence. Ecological criteria for the groups are to be established using a 'cradle to grave' approach which is defined in Article 3 to mean 'life cycle of the product from manufacturing, including the choice of raw materials, distribution, consumption and use to disposal after use'. These criteria must be 'precise, clear and objective ... ensure a high level of environmental protection, be based as far as possible on the use of clean technology and, where appropriate reflect the desirability of maximising product life'. An indicative assessment matrix is specified in the Regulation which identifies the relevant parameters to be considered.

Article 6 sets up the mechanism by which the criteria are to be agreed taking into account the statement in the preamble of the Regulation which states that 'the award scheme for the eco label will take into account the interests of the principal groups concerned and therefore should provide for appropriate involvement of these groups in the definition of product groups and specific ecological criteria for each product group'. In particular, 'the principal interest groups' which are to be drawn from *inter alia* industry, commerce, consumer and environmental organisations are to be consulted by the Commission which must also take account of 'national consultations'.

The procedures for so doing, however, are to be established by the Commission. There is no specific mechanism provided in the Regulation where any party believes that they have not been adequately consulted. The procedure by which the groups and criteria are to be decided is defined to some extent in Article 7. Ultimately, the decision is one for the Commission after consultation with a committee of Member State representatives in the first instance or the Council. At this stage, the success of the consultation process by which third parties are given some input into this decision is difficult to judge.

Decisions as to the groups and criteria are to stand for 'about three years' and to be published in the *Official Journal* under Article 14. Member States must also make these details known to consumers and undertakings using 'appropriate means'. In that way, members of the public are given the means to make more informed purchasing choices. On the other hand, details of the process by which the groups and criteria are arrived at is not available. In the first instance, they are the responsibility of 'lead' Member States which then notify them to the Commission.

So far only 22 product groups have been defined, for six of which formal criteria have now been adopted.[19] Criteria for another six were expected by mid-1995. A particular source of difficulty is reaching a consensus on the methodology to be used for a life cycle analysis, an evolving technique. In many cases, the basis on which certain criteria have been accepted over others is not going to be clear to third parties. The LCA process is neither transparent nor easily understood by members of the public.

Decision to award

The decision to award the eco label under the Regulation rests with the national competent body. There is no provision at this stage of the process for the public to be consulted nor for objections to be made to the competent body regarding the award. Nor will the public be given any opportunity to review the information on which the decision to award is to be based. The composition of the competent body is dealt with in Article 9 but does not require any particular sectors of society to be represented. Instead, Member States are to ensure that the composition of these bodies is 'such as to guarantee their independence and neutrality...'. Neither of these terms is defined and some critics believe that 'many eco-labelling boards have been captured by the very groups whose products are to be assessed'.[20]

On the other hand, procedures for challenge may continue to exist at the national level through, for example, an application for judicial review of a public body in the UK. Access to the information on which the decision was based may also be obtained through national rules such as those implementing the Directive on Access to Environmental Information.

The process by which the competent body is to make its decision is set out in Article 10. It does not prescribe in any detail what information is to be provided by the applicant. There is no specific provision allowing the competent body to seek further information before making its decision nor any sanction required should false information be provided by the applicant. Should the competent body wish to make an award it is obliged to notify the Commission which will in turn notify other Member States. The Commission is then free to object to the award within a period of 30 days. If there are objections, a further 15 days is given to resolve the dispute after which the matter must be decided in accordance with Article 7 which provides for consultation.

Until the award has been granted, the Regulation specifically provides that '[c]ompetent bodies, the Commission and all other persons concerned may not disclose to third parties information to which they have gained access in the course of assessing a product with a view to the award of the label'.

19. See for example Soil Improvers Decision 94/923/EC OJ L 364/21 31.12.94; Toilet Paper Decision 94/924 OJ L 364/24 31.12.94; Kitchen Rolls Decision 94/925/EC 364/32.
20. West, K. (1995) Ecolabels: the industrialisation of environmental standards, *The Ecologist*, 25 (1), pp 16-20.

Once the decision to grant has been made then information regarding the 'reasons and relevant information for awarding the label' may not be kept confidential. Following the award, the Regulation provides that certain matters will be published in the *Official Journal*. A list of products awarded should be issued at least once a year, a consolidated list to be published by the Commission 'from time to time'. So far the award of labels has been very slow in the Member States. In the UK, for example, only one label has been awarded for Hoover washing machines.

Once awarded, the Regulation requires a contract between the competent body and applicant to be entered into before the label may be used. Whilst the Regulation provides for a standard form of contract to be agreed under the Article 7 procedure which includes consultation with the 'consultation forum', use of the contract is not mandated by the Regulation. There appears to be no other mechanism by which contracts otherwise agreed will be made available to the public. There is no requirement for the contract to be published in the *Official Journal* for example.

LESSONS FROM EIA

Involving the public

The experience of EIA demonstrates the importance of early public and NGO participation in decision-making. By enabling such participation numerous benefits can accrue to the decision-making process itself and to all the players involved – the developer, other organisations, the public and decision-maker. These include:

- identification of key issues of concern to the public;
- perceptions addressed as well as reality and/or science;
- local expertise and knowledge utilised;
- initial problem clearly identified and possible alternatives/ options considered;
- people affected are involved before irreversible decisions are made;
- avoidance of litigation.

The public and NGOs have a crucial role to play in the scrutiny of the EIA process and its documentation. Both are important components of any quality control and enforcement process. They are able to offer:

- critical analysis of documentation, e.g. scoping document or ES;
- local expertise, e.g. retired engineers, lawyers, amateur naturalists etc.;
- the public may alert authorities/agencies to issues pre- and post-development;
- NGOs may be involved in their own monitoring programmes, or have a direct interest e.g. own nature reserve or land affected;
- legal challenge.

Many of these functions are equally relevant to the more recent EC instruments, e.g. critical review, relevant knowledge, perceptions, alternatives. Under project EIA it is perhaps rather easier to identify who the 'concerned public' might be when it comes to who should be involved or consulted. Compare this with, for example, eco-labelling or even EMAS and it is possible to see that the public in such cases is less easily defined. With EIA, the public concerned will often be directly affected by the proposed development, e.g. in terms of land take or specific impacts, which focuses attention considerably. However, experience with EIA suggests that it is important to provide opportunities for early public involvement even if it is difficult to define precisely who the public is likely to be. Above all, it is important not to exclude elements of the public who might otherwise have an unexpected interest in the particular decision. To do so will only encourage conflict and litigation at a later stage.

Enforcement, litigation and complaints

If the public have had limited involvement or access to information during the EIA process itself, what recourse do they have under the EIA Directive? Since the Directive formally requires only consultation on the information provided to the competent authority, the answer is likely to be very little. However, a critical question which arises is that of who has *locus standi* (standing) to bring an action before the courts on the grounds of breach of EIA requirements. This issue has been addressed by a number of cases in the UK and often found to be highly limiting. For example, in the case of *R* v *Poole Borough Council ex parte Bee Bee and others* (1990), WWF (UK) were only considered to have 'sufficient interest' because they had made grants to the British Herpetological Society for many years to assist in work on sand lizards and smooth snakes and had made their application for judicial review jointly with the BHS.[21] Macrory[22] points out that different Member States are already applying different rules of standing to the EIA Directive and that this issue needs to be addressed more directly at European level, either by the European Court or through Community legislation.[23]

If access to the courts is limited, what alternative recourse does the public have? The easy, cheap, although not necessarily any more effective, alternative to EIA litigation in a Member State is to make a formal complaint to the European Commission which is charged with ensuring the enforcement of Community legislation. Some of the key UK cases have also been pursued through complaints to the European Commission, though not necessarily with any greater success. Under the Treaty of Rome, it is the European Commission's task to act as 'Guardian of the Treaty' and ensure that Member States comply with their obligations under Article 5 to implement legislation agreed by the Community. Any person is free to make a complaint to the Commission bringing non-

21. See Sheate (1994) *op cit.*
22. Macrory, R.B. (1992) Environmental assessment and EC law, case law analyses, [1992] JEL, 298-304.
23. Note recent proposals for an EC Directive on Access to Justice, see Fuhr *et al* (1995) 'Access to justice: legal standing for environmental associations in the European Union' in Robinson and Dunkley, *Public Interest Perspectives in Environmental Law,* Wiley Chancery; also Fuhr, Gebers, Ormond and Roller, ELNI Newsletter 1/94, pp 3-9.

compliance to its attention. If satisfied, the Article 169 process which begins with a letter of formal notice and ends in the ECJ may take place. By January 1994, such letters had been issued against Germany, Greece and Italy in respect of the Access to Information Directive. As yet, however, no case has reached the ECJ.

Should the case reach the ECJ, there are a number of principles which will guide its decision. In determining the proper interpretation of the provision in question, for example, the Court may have regard to any of the languages in which the directive is published. In principle, each has the same legal force under article 248 but 'as words do not necessarily mean the same thing in different languages, it is necessary to study the different language versions, as well as the systematic context and objective of the provision in question in order to understand the effect of a particular article'.[24] In addition, the Court may look at the Commission's proposal and the opinions given during the legislative process. It may also make reference to the Directive's preamble but not the Council proceedings.

In October 1991, for example, the European Commission sent a detailed and lengthy Letter of Formal Notice, under Article 169 of the Treaty of Rome, to the UK Government describing various infringements of the EIA Directive, including seven specific projects for which it was alleged EIA had not been properly carried out, and alleged failure to fully implement the Directive. Commission action against the specific projects was subsequently withdrawn, either because the projects themselves were withdrawn or because the requirements of the Directive were met to the satisfaction of the Commission. Infringement proceedings are inevitably highly political and the action described above resulted in considerable public and political controversy, not least because of the coincidence with debates over the Maastricht Treaty on European Union. Such infringement action will tend to be resolved wherever possible through mutual agreement, rather than it being taken finally by the European Commission to the European Court. It is widely accepted that the specific allegations relating to individual projects, such as Twyford Down and the Channel Tunnel Rail Link, were dropped in return for the UK Government agreeing to amend the implementing regulations in line with the view of the Commission. In other cases, e.g. Germany, the Commission has pursued alleged infringement of the EIA Directive to the ECJ.[25]

The complaint procedure is an unsatisfactory mechanism for enforcing the requirements of the EIA Directive. First, it provides an ineffective remedy for individual cases, especially where poor application is concerned or where there is poor quality of an environmental statement. The complaint procedure is intended to resolve primarily issues of principle to do with implementation of Community law, not to provide relief to complainants over individual projects. Second, because the EIA Directive is procedural, the Commission can only take action so long as there is a failure to comply with the procedures laid down in the Directive. If the Member State subsequently complies with the requirements of the Directive the Commission no longer has grounds for action. Again, this is particularly apposite with respect to individual cases, e.g. a failure to provide a non-technical summary is very easily resolved. The fact that it may be resolved is not necessarily an indication that the enforcement mechanism is effective, not least because any subsequent compliance is clearly reluctant and not complying with the spirit of the Directive. The third problem with the complaint procedure is that the Commission is not obliged to pursue infringement action even if there is a breach of Community law,[26] and that it is unlikely to be open to an individual to seek any legal remedy against the Commission for failure to do so.[27] Finally, the procedure is very slow and laborious and generally inappropriate if urgency is of the essence.

Apart from an action by the Commission against the Member State, there is also the question of the extent to which private citizens might be free to bring an action in respect of a failure to properly implement the provisions. There are a number of potential routes by which this might occur. Of particular interest is the extent to which any provision may be relied upon as having 'direct effect'.

In a number of cases, the ECJ has been willing to find that 'To the extent that the Directive has not been properly implemented by [national legislation] it may be possible to rely on those terms of the Directive which may be directly effective'.[28] The doctrine is not available in every case but only in respect of those provisions which meet the necessary conditions, that is, that they are sufficiently precise and unconditional. In addition, it may only be relied upon in proceedings against the government or an 'emanation of the state'.[29]

The doctrine might be relied upon in an application for judicial review made in respect of a body's decision to refuse a request for information. The question of standing however might serve to limit the usefulness of this course of action just as it has done in relation to EIA. On the other hand, the courts more recently have demonstrated a willingness to construe this issue more broadly than they have done in the past.

The fact that the complaint procedure is being pursued in so many cases is, however, an indication of the failure of Member States and EC environmental legislation generally to establish effective national enforcement mechanisms, e.g. national EIA enforcement agencies,[30] and the general inaccessibility of the litigation process to the public.

CONCLUSIONS: IMPLICATIONS FOR PUBLIC PARTICIPATION

There is a growing consensus implicit in international and European legislation that public participation in environmental decision making should be promoted to ensure the best outcome for all involved. The provision of information has a

24. Kramer (1992) *op cit.*
25. See Case 431/92, *Commission* v *Germany*.
26. See also Sheate (1995) *op cit.*
27. *Lord Bethell* v *Commission*, 1982.
28. Case C 208/90 *Theresa Emmott* v *Min for Soc Welfare* [1991] ECR I- 4269 par 20.
29. *Foster* v *British Gas Plc* (1990) 3 All ER 897.
30. See Sheate (1994) *op cit.*

vital role to play as a means of facilitating such participation. These developments in wider public participation in many ways mirror the history of EIA development as prevention (of impacts or conflicts) is seen as better than cure (mitigation or litigation).

There are now a number of EC instruments which have been designed expressly to further that objective although experience of their effectiveness remains limited. Environmental impact assessment however now enjoys the benefits of years of experience which is capable of review. It offers valuable lessons for the more recent generation of instruments such as auditing and eco labels. In particular:

- information provided to the public early in the process of decision-making may well result in a different, more sustainable outcome. Recourse to justice at the end of the process can only provide limited remedy/compensation for a bad decision although its availability is important to encourage early participation to take place;
- careful attention should be given to the scope of the information which is to be provided to the public. Experience with EIA shows that there is a tendency for providers to create very large and over-comprehensive documents rather than focus on significant effects. In an effort to avoid litigation and complaints, there is sometimes a failure to address the real concerns of EIA. Information supplied under Directive 90/313/EEC may suffer the same fate. On the other hand, EMAS attempts to address this issue through a requirement that the ES be concise and non-technical;
- the credibility of information-based tools may depend on the inclusion of some kind of third party quality assurance of the information which is being provided. EIA has suffered from the absence of such a mechanism in the UK. The EMAS scheme has tried to address this concern to some extent through the use of accredited external verifiers but their value will depend on the accreditation criteria which have yet to be developed in most countries. Accreditation in EIA, however, has not always had an illustrious history, creating problems in, for example, the Czech Republic where it is seen as inhibitory to the development of a competitive consultancy market.[31] The issue has not yet been addressed in relation to eco-labelling. Public scrutiny has a particularly important role to play in the absence of other review or enforcement measures, though it is questionable whether governments should rely on this as a substitute for adequate enforcement mechanisms;
- the practical arrangements by which members of the public have access to information including the costs which must be met will seriously affect the utility of these types of instruments. Experience with EIA has demonstrated that if information is too expensive to obtain (e.g. the charge for a copy of an ES), public access is more limited. Important questions arise in EIA and under the Access to Information Directive as to what sum is 'reasonable';
- as increasing numbers of environmental management instruments come into operation, care will be needed to avoid confusion among the public with regard to overlapping terminology, e.g. environmental statements, environmental assessment;
- the European Union continues to be faced with problems of implementation and enforcement that go to the heart of its prime aims of harmonisation and the creation of a single market, despite the attention paid to this issue and the increased use of the Regulation rather than the Directive in environmental legislation. Information-based tools do not necessarily remove the uncertainties inherent in the legislation;
- the often opposing political forces at work provide an uncertain context in which to develop instruments for achieving sustainable development. The concept of sustainable development, while enshrined in international agreements, is increasingly being re-interpreted by governments as 'business as usual' and, in conjunction with subsidiarity and deregulatory arguments, may result in constraints not so much on existing levels of public participation, but more on the extent to which it will be extended.

In light of the above, and the commercial interests which are at stake, litigation over the nature and scope of the legislation discussed is bound to arise. This is likely to undermine at least in the short term some of the reasons why these instruments have been supported by Member States (particularly the UK). The benefits of voluntary schemes, which assist enforcement bodies and the disclosure of information to public groups and which might reduce a reliance on public resources, may be countered by delay in the face of the Government's desire for deregulation. Nonetheless, the value of public participation is now firmly recognised in environmental law at all levels. The challenge, therefore, for governments is to seize the opportunity presented for better decision-making by more effectively facilitating public participation in that process. The information-based tools discussed above provide a means to this end.

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31. See Branis, M. (1994) A system of certified environmental impact assessment experts in the Czech Republic, *Env. Impact. Ass. Rev.*, Vol. 14, pp. 203-208; Romanillos Palerm, J. and Sheate, W.R. (1996) EIA in Central and Eastern Europe: lessons from the Czech Republic and Romania [1996] EELR (in press) (January).

Appendix 4

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changing nature of the relationship between EU institutions. The increased involvement of the EP in particular, has ensured that there is a greater degree of public accountability and participation in policy formulation.

In the future, the goal of the EP's Environment Committee must be to achieve a net *improvement* in the overall environmental quality of life, rather than simply trying to arrest the decline. In addition to ensuring that the European legislation that is adopted achieves the highest possible standards rather than those of the lowest common denominator, further institutional changes will be necessary to realise the essential goal of sustainable development as expressed by the Brundtland Commission. Ensuring "development which meets the needs of the present without compromising the ability of future generations to meet their own needs ..." is the very least we can do.

Amending the EIA Directive

Amending the EC Directive (85/337/EEC) on Environmental Impact Assessment

W R Sheate, Lecturer in EIA, Imperial College Centre for Environmental Technology, University of London.

William Sheate has been an expert advisor to the EC's Economic and Social Committee in its considerations of the European Commission's proposed amendments to the EIA Directive. He is a member of the Denton Hall Environmental Law and Management Group at ICCET.

Summary: Environmental Impact Assessment (EIA) has been the cornerstone of a preventive European Community (EC) environmental policy since the 1970s and successive Environmental Action Programmes. Agreement of the EIA Directive 85/337/EEC in 1985, with implementation required by July 1988, heralded, many hoped, a new era. While undoubtedly it has brought significant improvements in the provision of environmental information to decision-making, the recent review of the Directive has highlighted a number of problems and difficulties with implementation in Member States. Current proposals by the European Commission seek to remedy some of these, and include improved and early scoping and more consistent screening of projects requiring EIA. However, the prospect of even the Commission's modest proposals being accepted by the Council of Ministers is anything but a foregone conclusion. Welcome though they are, these amendments will do nothing to extend EIA to more strategic decision-making at policy, plan and programme level – strategic environmental assessment (SEA) – even though SEA is a central tenet of the Fifth Environmental Action Programme. A quarter of a century after the introduction of EIA and SEA in the US, the European Union is still struggling with the practical implications of one of its most important environmental policies.

I EIA in the European Community – the current Directive

The European Community (EC) Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment,[1] was agreed and notified to Member States in July 1985. Formal compliance was due on 3 July 1988. The Directive is a procedural one, which seeks to ensure that before a decision is made about whether consent should be given to go ahead with a development a minimum level of information about the likely significant effects on the environment has been provided to the "competent authority" (for example, a local authority or Government Minister) making the decision. It does not in itself require a Member State to refuse to give consent for a project even if it is likely to be highly damaging to the environment. It should, however, ensure that decisions are taken with full knowledge of the environmental implications of the proposal. In principle, the Directive applies equally across all policy sectors by providing a framework within which Member States must act.

Projects likely to have significant effects on the environment by virtue *inter alia* of their nature, size or location must be made subject to an assessment of their effects before consent is given. There are two lists of projects: Annex I projects require environmental impact assessment (EIA) in all cases and include major chemical works, power stations, motorways etc.; Annex II projects must be subject to assessment where Member States consider they are likely to have a significant effect on the environment. Annex II covers the majority of development projects subject to various criteria and thresholds according

[1]Official Journal, 5 July 1985 L 175.

Amending the EIA Directive

to the individual Member State. This leads to considerable variation throughout the EC in the extent to which the Directive is implemented and its effectiveness in requiring EIA for any project likely to have significant effects on the environment. Inevitably, these discrepancies in implementation occur both within sectors and among sectors across the Community. The direct and indirect effects of the proposed project on the following four factors must be identified, described and assessed, where appropriate:

- human beings, fauna and flora;
- soil, water, air, climate and the landscape;
- the interaction between the first two groups;
- material assets and the cultural heritage.

Information supplied by the developer and gathered as a result of consultations must be taken into account in the decision-making process. Although the Directive studiously avoids reference to a formal impact statement, such a document is mentioned in the implementing legislation of many Member States. The developer must supply a minimum level of information and may supply additional information where appropriate. The minimum information is:

- description of the project with information on site, design and size;
- the data required to identify and assess the main effects which the project is likely to have on the environment;
- a description of the measures envisaged to avoid, reduce and possibly remedy significant adverse effects;
- a non-technical summary of the above information.

Annex III provides further guidance on information to be supplied, including where appropriate an outline of the main alternatives studied and the reasons for the developer's choice. The description of effects should consider direct effects and any "indirect, secondary, cumulative, short, medium and long term, permanent and temporary, positive and negative effects of the project".

The public must be consulted before the project is initiated (Article 6(2)). However, there has been some confusion here since Article 8 requires information gathered pursuant to Articles 5, 6 and 7 to be taken into consideration in the development consent procedure. That would imply that the public must be consulted before consent is given, not just before the project is initiated. Any request for development consent and the information supplied by the developer must also be made public. There are also arrangements for consulting other Member States where a project is likely to have transboundary impacts. The decision and reasons must also be made public.

Five-year Review

The Directive required the European Commission to publish a report for consideration by the European Parliament and the Council on the application and effectiveness of the Directive after five years from notification. This five-year review report was due in July 1990, but was only published in April 1993.[2] This was due to delays in implementation, but also as a result of delays within the Commission and the need to gather Member States' comments on the draft report. The review report has formed the basis for the Commission to bring forward proposals for amending the Directive.

The Commission decided that the review should focus on:

i) the extent of formal compliance by Member States with the requirements of the Directive;
ii) the criteria and/or thresholds adopted by Member States for the selection of Annex II projects to be subject to assessment;
iii) the nature and extent of practical compliance by Member States with the requirements of the Directive;
iv) key aspects of EIA practice (notably use of scoping, review of EIA studies, monitoring of implementation and post-auditing of EIA studies, provision of guidelines, and provision of training facilities);
v) overall assessment of the effectiveness of the Directive's implementation, and difficulties in its implementation.

The review produced a useful snapshot of implementation throughout the Community as of 1991. Particularly interesting were the comparisons of Member States' use of criteria and thresholds and systems for quality control of documentation (environmental statements). It throws into sharp perspective, for instance, the shortcomings of the often much-praised Netherlands EIA system. While quality control of the process is better in the Netherlands than in many other Member States, as a result of its EIA Commission, this is aided by the fact that the number of projects subjected to EIA is comparatively small. Thresholds for determining which Annex II projects should be subject to EIA in the Netherlands are invariably set high, often much higher than some other Member States. The diversity of thresholds (rigid or indicative) used by Member States for selecting certain categories of project is revealing and raises questions as to whether the Directive as implemented is really achieving its wider harmonisation objectives. This problem is clearly illustrated by the thresholds applied to pig rearing installations, for example. In Greece EIA is required for a project which is to house only 20 pigs; in Ireland the threshold is 1000 pigs; Germany, 1400; and the UK, 5000 pigs. Are Greek pigs so much more environmentally destructive than those in the UK? Similar disparities can be seen for quarries (France, 5 ha or more; UK 50 ha; Netherlands 100 ha) and installations for the disposal of industrial and domestic waste (Ireland and Netherlands, capacity of 25,000 tonnes or more per annum; UK, 75,000 tonnes).

The variation in thresholds means that in practice the number of projects subject to EIA varies enormously among Member States. A large number (c. 6000 per annum) of relatively small scale projects are caught by the net in France where low thresholds are imposed and there is wide application, whereas a small number (c. 80-100) of major projects are subject to EIA in the Netherlands, with the UK being somewhere in between (c. 300).

The report identified where a number of improvements should be made. It concluded that the EIA process is, in many cases, not starting early enough. It is often bolted on to the planning and design process rather than being integral from the beginning. The report concluded that there is often inadequate quality control of the environmental statement and the EIA process as a whole. Adequate mitigation measures are frequently missing from the planning and

[2]COM (93) 28, 2 April 1993: *Report from the Commission on the Implementation of Directive 85/337/EEC.*

design of projects. Consultation in some cases and in some Member States is weak and the availability of environmental statements is sometimes poor. The review also concluded that the contribution of the EIA process to decision-making and the role of monitoring project implementation are not as clear or as effective as they could be. This last point is particularly disturbing, since EIA is essentially about improving the quality of decision-making by making it more informed.

Many of the individual Member State annexes include recommendations for improving implementation in the Member State, some of which may be achieved through amending the Directive itself. One of the recommendations identified in the UK annex is that consideration should be given to the establishment of an independent statutory body to set and maintain standards relating to the EIA process.

The amendments arising out of this review could potentially transform the Directive into a more effective tool for achieving environmentally sustainable development. However, the review failed to address what is probably the greatest weakness of the present EIA Directive: that it applies only to project level decision-making, thereby occurring only after crucial policy decisions have been made or development programmes decided. The report did however, recognise that it had not addressed this key aspect of EIA. Strategic environmental assessment (SEA) dealing with policies, plans and programmes in addition to project level EIA is crucial if many environmental problems are to be anticipated and avoided before they emerge.[3]

II Amendments proposed to the EIA Directive by the European Commission

Introduction

The amendments proposed by the Commission[4] are largely to be welcomed. They have been based on the findings of the five-year review report. However, in many ways they represent a minimalist approach to improving the present Directive which is reflected in the length of time it has taken for the amendments to be agreed within the Commission and emerge as published proposals. The proposed amendments inevitably represent the lowest common denominator to which the Commission believes Member States will agree. It is disappointing that the opportunity has not been taken by the Commission to take forward the implementation of EIA in the Community and extend its application in line with the Fifth Environment Action Programme. EIA is a key tool in helping to achieve environmentally sustainable development and a positive and enthusiastic endorsement of its principles from the Commission would have been encouraging. There is also a very real risk that there will be efforts by some Member States to weaken the Commission's proposed amendments or the existing Directive. The UK Government has already indicated that it will oppose any extension of the EIA process, eg scoping or post-project monitoring.

The Commission has proposed a number of key changes to improve the effectiveness of the Directive. These include: the scope of the application of the Directive; the content of the EIA study; improvements to the exchange of information and the decision-making process and measures to implement the Espoo Convention on transboundary impacts.[5] The proposals also include new screening criteria for Annex II projects, additions to the Annex lists and other minor changes.

Scope of the Directive (new Article 4)

The Commission proposes to clarify the circumstances under which Annex II projects (where EIA is discretionary) should be subject to EIA. The disparities between thresholds and criteria used in different Member States mean that certain projects which should be subject to EIA are not. In other cases, some Member States may be requiring EIA even for very small projects with no significant effects on the environment.

The Commission proposes to require EIA for all Annex II projects which affect special protection areas designated by Community legislation. In addition, the Commission proposes a new Annex (Annex IIa) containing selection criteria which must be considered by all Member States in determining which Annex II projects should be subject to EIA.

Both of these proposals are to be welcomed since they will provide a greater degree of consistency in the minimum level of EIA across Member States. However, the amendment is ambiguous as to which protection areas it covers and would not appear to cover other international designations, such as wetland sites designated under the Ramsar Convention. Clarification is needed, therefore, of the Commission's proposed amendment in Article 4 (2) which refers to the projects likely to have significant effects on "the special protection areas designated by Member States pursuant to Community law". While it is understood that the Commission intends this amendment to cover the Birds and Habitats Directives, this could be better clarified, since the term "special protection area" is a specific term used in the Birds Directive. A better term might be:

> "areas designated or proposed for environmental protection by Member States pursuant to Community law or other international agreements or conventions."

Member States will still be able to apply more stringent requirements for EIA in line with subsidiarity principles, but the new selection criteria proposed in Annex IIa should ensure that Annex II projects having significant effects in line with the criteria suggested will be subject to EIA. This should help reduce the number of complaints to the Commission over failure to require EIA and help ensure that environmentally damaging projects do not slip through the net.

Content of the Impact Study

There has been considerable concern that the wording of Article 5 of the EIA Directive has resulted in EIAs including only the minimum specified information rather than the information identified in Annex III to be included where

[3]Cerny, R J and Sheate, W R (1992), *Strategic Environmental Assessment in the European Community: Amending the EIA Directive*, Environmental Policy and Law, Vol. 22, No. 3, pp 154–159, June 1992

[4]COM (93) 575 final, 16 March 1994.

[5]Official Journal, 24 April 1992 C 104.

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appropriate. The Commission proposes to introduce the concept of scoping, so that the competent authority will define, in consultation with the developer and other authorities, the scope of the information to be considered in the EIA, including that relating to alternatives. The proposed amendments include strengthening the Annex III requirement to consider alternatives so that a description of the main alternatives which might be envisaged can be required. Clarification of the definition of alternatives is needed to ensure it includes alternative options and/or processes and not just locations, for example:

" 'alternative' means:
– alternative processes and options to the type of activity proposed which would nevertheless meet the objectives of the proposed activity, as well as alternative locations."

The Economic and Social Committee[6] has suggested that the amendment should refer to "a description of *reasonable* alternatives ..." rather than those which might be envisaged, which would also be in line with the Espoo Convention.

The scoping proposal is to be warmly welcomed since experience has shown that where scoping is carried out, particularly in an open and accessible way, there can be advantages to the developer, the competent authority and the public in ensuring that key issues are addressed and not left until it is too late, allowing unnecessary conflicts to arise. This proposal ensures that the discretion as to the issues to be addressed rests with the Member State competent authority rather than with the developer as has been the case hitherto. However, if scoping is to be effective the public should also be given an opportunity to have an input into the process, otherwise key issues may be omitted.

Exchange of Information

The Commission's proposals for clarifying the provision and exchange of information (new Article 5(3) and Article 6(1)) is to be welcomed. The latter will ensure that environmental authorities are properly consulted on the information supplied, not just on the request for development consent. New Article 6(2) is also to be welcomed, since this will clarify the confusion over consulting the public so that this occurs "before development consent is granted" rather than before the project is initiated.

Transboundary Impacts (New Article 7)

New Article 7 implements the Espoo Convention on environmental impacts in a transboundary context. It will strengthen the requirement for Member States to consider transboundary impacts by requiring a joint examination of the impacts and measures to offset them by the respective environmental authorities and their nationals. Importantly, Article 7 makes provision for ensuring monitoring of the transboundary effects at the expense of the Member State in which the project is proposed. This is to be warmly welcomed, although it is a great disappointment that the Commission did not see fit to carry this requirement beyond transboundary impacts to the monitoring of the effects of all projects subject to EIA, since post-implementation monitoring and evaluation – as recognised in the Commission review report – is a crucial part of the whole EIA process, and essential to feed back into best practice. The Commission instead proposes to carry out a study of the costs and benefits of such a monitoring requirement.

Decision-making

The Commission proposes to amend Article 8 so that it strengthens the consideration given to the opinions as well as the information gathered pursuant to Articles 5, 6 and 7 in the development consent procedure in order to ensure that the EIA process is properly informing decision-making. This change is to be welcomed. The Commission also proposes to clarify the type of information to be published when a decision on consent has been taken (Article 9), including reasons for granting or not granting consent despite unfavourable opinions gathered during the consultation stage. This change will help in ensuring that the information gathered pursuant to the EIA process is taken into account in the decision-making process and that clear justification for the decision is provided. However, in replacing Article 9 with a new Article 9 the sentence "The detailed arrangements for such information shall be determined by Member States" has been omitted. This is crucial and should be reinstated since otherwise there is no indication as to what publication of the consent decision means: how is it published and where?

Annexes

The Commission's proposals for additional categories to Annex I and Annex II are welcome, as is the proposed restructuring of the categories in Annex II. There has been some confusion over the definition of some of the project categories of Annex I (eg, integrated chemical installations) and Annex II as well as obvious omissions of projects which can have significant effects on the environment. These proposals – which include the clarification of agricultural projects and new Annex II categories of Land-use projects and Tourism and leisure – will help to remedy these problems. However, there are inevitably some additional categories which the Commission would appear to have overlooked and which are suggested below for inclusion. The addition of the new Annex – Annex IIa – is particularly welcome and allows the application of the new provision in Article 4(3). The criteria in the new Annex are similar to those originally proposed in early drafts of the EIA Directive, but rejected when it was finally agreed in 1985.[7] Experience has shown that a minimum level of consistency in the selection criteria for Annex II projects is crucial if wildly differing regimes are not to operate in different Member States.

The amendment to Annex III, strengthening the consideration of alternatives, should also bring positive benefits. The proposed Annex IV is part of the implementation of the Espoo Convention regarding the arrangements for public consultation between Member States and the information considered appropriate in the case of projects having transboundary impacts.

[6]CES 700/94 fin, ENVI/376 *Environmental Impact – Public and Private Projects*, 28 July 1994.

[7]see also "Mock" EC Directive on Environmental Assessment: *Proposals for amending EC Directive 85/337/EEC*, Council for the Protection of Rural England (CPRE), London, August, 1992.

Amending the EIA Directive

III Omissions

While the Commission's proposals will certainly bring about some significant improvements in the EIA Directive, if agreed by the European Parliament and the Council, there are a number of other improvements which would bring added benefit.

Definition of Project

It is disappointing that the Commission has not proposed any clarification to the definition of "project". This has been the basis for many complaints (including several from the UK and a recent German case[8]) to the Commission concerning transport and other infrastructure (such as electricity generation) schemes, specifically over whether a larger project can be split up into smaller schemes for the purpose of applying the EIA Directive. The Commission could usefully take this opportunity to clarify that a project means the overall project including associated developments, not simply the smallest component into which the project can be broken down. It should be remembered that the whole *raison d'être* behind the Directive is that

> "... effects on the environment [should be taken] into account at the earliest possible stage in all the technical planning and decision-making processes ..."[9]

This admirable sentiment cannot be achieved if EIA is applied only at the latest stage, eg individual schemes of a larger road project or upgrading of an entire route; or for overhead power lines after the decision to locate a power station has been made without any consideration of the power line implications.

A suitable definition of project might be (Article 1 (2)):

" 'project' means:

- the execution of construction works or of other installations or schemes, including associated or component schemes where part of an overall project,
- other interventions in the natural surroundings and landscape including those involving the extraction of mineral resources;"

The Commission does propose to clarify the definition of "modifications to projects" which is to be welcomed. With the political will, a re-definition of 'project' as 'activity' or 'action' might enable the principles of the EIA Directive to be extended to more strategic decision levels, such as programmes, plans, policies and legislation.[10] Unfortunately there seems little likelihood of that happening during this revision of the Directive.

Defence Installations (Article 1 (4))

There is little justification for the continued exemption of defence installations from the requirements of the EIA Directive. Many defence projects, such as use of land for military training, the building of barracks and housing, have little real national security significance, but can have significant impacts on the environment. They are also often located where other forms of development would not be allowed, eg upland and moorland areas. It would seem sensible that any exemption of defence projects should be restricted solely to those which have national security implications.

Projects Subject to Parliamentary Approval (Article 1(5))

There has been considerable confusion as to whether Article 1(5) exempts projects subject to national Parliamentary approval from the EIA Directive or whether it exempts them only where the Parliamentary approval system already meets the objectives and basic requirements of the Directive. This has been caused by the difficult legal interpretation of the word "since" (at least, in the English translation). A useful amendment would be to replace the word "since" with the word "if" so that it is clear that such projects can be exempt from the Directive only if its objectives are already met by the existing Parliamentary approval process.

Post-project Monitoring

In early drafts (during 1993) of the Commission's proposed amendments there was a new provision to ensure that post-project (or post-implementation) monitoring occurred. This does not appear in the proposed amendments and the Commission is committed only to studying the costs and benefits of such a provision. Yet, the Commission's own five-year review of the Directive made it clear that post-project monitoring and evaluation is crucial to ensuring an effective EIA system. It is difficult to equate these two positions. EIA implementation could be greatly helped by an amendment to Article 9 along the lines originally considered by the Commission:

> "Member States shall adopt the measures necessary to ensure that the effects arising from the implementation of the project will be monitored and that the results of the monitoring and the appropriate measures proposed by the competent authority to reduce or offset any significant adverse environmental effects revealed are made available to the public concerned and where appropriate to Member States likely to be affected."

Annex II Projects

A number of categories of project could usefully be added to the Annex lists in addition to those welcome amendments proposed by the Commission. These are shown in the Table at the end of this article.

The Annex system, while providing a degree of certainty to developers and competent authorities, is also inherently inflexible and can never be comprehensive. This is evident from the welcome amendments suggested by the Commission, eg for tourism and leisure, and agricultural projects. However, greater flexibility could be provided by enabling Member States to require EIA for any project likely to have a significant effect on the environment. This would be fully compliant with subsidiarity and is allowed under Article 130t of the Treaty. Such a suggestion is further aided by the Commission's proposed new Annex IIa on Screening Criteria, to help Member States decide when an Annex II project will have significant effects on the environment. There is no reason why these same criteria cannot be applied to any project, even if not specified in the Annex lists. A new category (12b) in Annex II (see Table) would provide this

[8]ECJ Case C-396/92, *Bund Naturschutz and others.*
[9]Preamble to Directive 85/337/EEC.
[10]Supra notes 3 and 7.

Amending the EIA Directive

flexibility and ensure that new damaging projects (which may emerge rapidly through developments in new technologies) do not slip through the EIA net. As currently drafted the EIA Directive, even with the proposed amendments by the Commission, could not be relied upon should a damaging new project category affect areas designated under other Community legislation. Only a revision of the Directive would allow that new project category to be added to the Directive.

Subsequent Reviews of the Directive

The Economic and Social Committee, in its deliberations during May and June 1994 on the Commission's proposed amendments to the EIA Directive, has suggested that a review of the Directive should be carried out after three years.[11] That is a welcome proposal, but it should be a regular, periodic review to ensure that the Directive is able to be updated on a regular basis in what is a rapidly developing field.

Creation of a Committee to help in subsequent reviews

In order to facilitate regular reviews of the Directive it might also be helpful to establish a Committee to assist the Commission in the task. This is a familiar provision in some other environmental Directives, such as the Urban Waste Water Treatment Directive (91/271/EEC). A new article along similar lines could be added at the end of the Directive. Such a Committee would also help prevent the lengthy delays in reporting we have seen for the first five-year report, by ensuring that monitoring and evaluation of the Directive are on-going processes rather than merely snapshots at irregular intervals.

IV Conclusions

The Commission's proposals, if agreed, would bring about welcome improvements to the Directive. However, they clearly represent the victory of political expediency over what is "desirable in environmental terms".[12] The proposed amendments do little to move forward commitments to sustainable development in the Fifth Environmental Action Programme or in Agenda 21. Unfortunately, even the success of the Commission's comparatively modest proposals is far from guaranteed, given the level of scepticism of some Member States towards EU legislation, continuing debates over subsidiarity, and the deregulatory efforts of those wishing to reduce all burdens on industry. Yet environmental constraints on industry and individuals are inherent in the concept of sustainable development. Providing effective mechanisms, such as EIA, for managing this is essential to turn those commitments into something more than rhetoric.

Efforts by the Commission to take forward SEA legislation are currently on hold and there would seem to be little prospect of such legislation coming to fruition in the foreseeable future. It is salutary to remember that the US National Environmental Policy Act 1969 (NEPA) made provision for SEA a quarter of a century ago, contiguous with project EIA in the same body of law. Piecemeal development of EIA and SEA legislation in the European Union may appease those who have no wish to see effective environmental protection, but it will do little to secure a more sustainable future for Member States.

[11]CES 700/94 fin, ENVI/376 *Environmental Impact – Public and Private Projects*, 28 July 1994.
[12]See more detailed discussion in Sheate, W R (1994), *Making an Impact: A Guide to EIA Law and Policy*, Cameron May, London.

Table: Suggestions for Additional Amendments to Annex II Project Categories

1. *Agriculture*
   Cultivation of crops for biofuels.
2. *Extractive industry*
   Turf stripping and/or soil removal where not part of another project category.
   Extraction of oil.[1]
   Extraction of minerals by marine dredging.[2]
3. *Energy industry*
   Installations for the generation of electricity using renewable technologies.[3]
   Installations for the processing of biofuels.

11. *Other projects*
    Telecommunications installations.
    Installations for the removal or reduction of industrial emissions to the atmosphere.
    Waste and potable water treatment plants.
    Cabling and trenching operations.
    Cable cars.

11a. *Tourism and leisure*
    Add "including dry-ski slopes" after "Ski-runs" in 11a (a).
    Visitor and cultural centres.[4]

11b. *Land use projects*
    "Intensification in the use of or" to be added before Commission's proposed 11b(a).

12a. Modifications to projects included in Annex I or Annex II which involve the enlargement of a project, the renewal of a development consent or a change in operation, including decommissioning.

12b. Any other project likely to have a significant effect on the environment.

[1]since it is oil that is extracted from the ground, not petroleum.
[2]or clarification that extraction of minerals includes marine dredging.
[3]or the amendment of Annex II 3(a) such that "Industrial installations for the production of electricity steam *or* hot water (unless included in Annex I)"
[4]The Commission's explanatory note refers to cultural centres, but this has been omitted from the proposed amendments to the Annex.

Appendix 5

SHEATE, W.R. (1995b) Electricity Generation and Transmission: A Case Study of Problematic EIA Implementation in the UK. *Environmental Policy and Practice* Vol. 5: 17-25.

Electricity Generation and Transmission: a Case Study of Problematic EIA Implementation in the UK

W. R. Sheate

The Electricity Act 1989, in privatising the electricity supply industry, also split the consent procedures in the UK for electricity generation and transmission. The problems this created came to public prominence in the case of the Wilton Power Station on Teesside and the subsequent North Yorkshire Power Lines Inquiry. The central issue was whether the environmental impact assessment (EIA) procedures implemented for electricity generation and transmission breached the requirements of EC Directive 85/337/EEC by preventing the EIA for a power station from considering the environmental impact of associated power transmission lines. A number of key issues emerged following a formal complaint to the European Commission and the public inquiry into the power lines in 1992, including the need for amendment of the UK EIA implementing legislation, a clearer definition of 'project' under the current EC Directive, the need for more strategic environmental assessment in the EU, and the scope for possible legal action in similar situations in future.

INTRODUCTION

Following the passage of the Electricity Act 1989 which privatised the Electricity Supply Industry (ESI) in the UK, consent procedures for new power stations and associated developments, such as power transmission lines, were separated. Even more crucially, the separation of generation and transmission meant that the latter would no longer influence directly the choice or location of the former. The National Grid Company is, instead, obliged to connect any new electricity generator into the National Grid system with little or no opportunity to comment on the suitability of the proposed location for that generator.

Herein lies potential for conflict between the consent systems and the requirements under EC Directive 85/337/EEC that an environmental impact assessment (EIA) be required prior to consent being given. That assessment should include direct, indirect and secondary effects of a proposed power station project. Yet how can all those effects be assessed if certain elements are excluded because they are subject to separate consent procedures?

The environmental impact of a power station is likely to be more than simply its land take and, as in this case study, it may well be the associated developments, or the sum of all the parts, which will have more significant effects on the environment than the core project itself. The crucial issue is whether the EIA for the core project should at least identify the environmental implications of the associated developments or simply pass the responsibility on to other companies and other consent procedures.

WILTON POWER STATION, TEESSIDE

Early in 1991, newspaper reports[1] began to identify the environmental consequences of proposed high voltage electricity transmission lines necessary to connect a new power station on Teesside, North East England to the National Grid system. To many, it was astonishing that these impacts had not been identified at the time the power station itself was proposed. Close inspection of the environmental statement (ES) produced for the power station revealed that such issues had barely been identified at the time and therefore did not feature in the consent process for the power station.

Following considerable public uproar over the proposed power lines, in April 1991 the Council for the Protection of Rural England (CPRE) lodged a formal complaint with the then Environment Commissioner, Carlo Ripa di Meana, at the European Commission in Brussels against the UK Secretary of State for Energy. The complaint concerned the EIA carried out for the 1875 MW gas-fired combined heat and power (CHP) station at Wilton, Teesside, proposed by Teesside Power Limited (TPL) (a consortium including Enron Corporation, ICI and four regional electricity companies).[2,3] Consent had been given for this station in November 1990 without, it was argued, the full environmental effects of the proposal having been properly considered.

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1. Mead, H. (1991) Electric shock, *The Northern Echo*, 7 February.
2. Council for the Protection of Rural England (CPRE), Letter of Complaint to the European Commission regarding Wilton Power Station, Teesside, 15 April 1991.
3. CPRE 101 and 102: evidence to the North Yorkshire Power Lines Inquiry by W. R. Sheate and J. G. Mackley respectively on behalf of CPRE, May 1992.

The power station fell under Annex I of the EC Directive on EIA (85/337/EEC) and therefore required a mandatory EIA to be carried out. However, the overall project involved, in addition to the building of the power station, four other components:

- a new natural gas pipeline;
- a gas reception and processing facility;
- a CHP fuel pipeline from the processing facility to the CHP facility;
- new overhead power transmission lines and system upgrades (some 90 km of 400 kV lines).

It was this latter component of the power station project which gave rise to most concern, although the other aspects also troubled local authorities such as Cleveland County Council at the time, in whose area the station was proposed.[4]

Consent for the power station was given by the Secretary of State for Energy on 5 November 1990, on the basis of the information provided in the environmental statement for the project and without a public inquiry. The environmental statement did not include a description or assessment of the effects of the associated power transmission lines, the gas pipeline, the processing facility or the CHP fuel pipeline. While separate environmental impact assessments are required for these developments, the complaint argued that, under the EC Directive, the main environmental effects of the associated developments should have been considered under the EIA for the power station.

Concern was expressed that the Secretary of State did not see fit to require further information on these aspects, as he is entitled to do under the UK's own implementing legislation.[5] Teesside Power Limited had successfully received consent for the power station even though the major impacts on the environment of the electricity transmission lines, the gas pipeline, the gas processing facility and the CHP pipeline did not feature in the accompanying documentation provided to the Secretary of State for Energy. Since the relevant information was not available to the Secretary of State – nor did he request such information – it was argued that his decision might not have been the same had all the relevant information been available to him. Since the information was not contained in the ES, neither the public nor interest groups had been alerted to these consequential impacts, which might otherwise have caused a public inquiry to be held where the issue would inevitably have been aired.

The EC Directive on Environmental Impact Assessment (85/337/EEC) requires, under article 3 and Annex III, an environmental impact assessment to identify, describe and assess, where appropriate, the direct, indirect and secondary effects of a project on the environment. This information is required, where it is appropriate and relevant to the proposed project, to be provided to the competent authority – in this case the Secretary of State for Energy – before a decision on consent is taken. The environmental statement for the power station[6] makes it clear that separate consent and environmental impact assessment procedures would be followed, by other companies, for the other aspects of the project, i.e. the transmission lines, the pipelines and the processing facilities. This piecemeal approach militates against a proper assessment of the environmental impact of the development of the power station and, it was argued, clearly contravenes the Directive's requirements that all direct, indirect and secondary effects of a project should be addressed, where appropriate.

The complaint suggested that it was not sufficient to argue that such information need not be included because it is dealt with by separate consent procedures or it is not relevant to a given consent procedure (article 5(1)(a) of the Directive). Article 5(1)(a) also refers to the relevance of the information '... to the specific characteristics of a particular project or type of project and of the environmental features likely to be affected', and that this, together with the requirements of article 3 and Annex III suggests that such information would be highly relevant to the consent procedure for the power station itself.

The environmental effects of the transmission lines and other consequential developments associated with the power station should have been addressed as part of the EIA for the power station itself. Not to do so devalues the EIA of the main project and the effectiveness of the EIA Directive itself. The question was: should the Secretary of State for Energy have required further information, including information of the likely significant effects on the environment of the associated development of transmission lines, pipelines and processing facilities, before taking a decision and granting consent for the power station?

As indicated by the environmental statement for the power station, the procedures established after privatisation by the Electricity Act 1989 have separated the consent and EIA procedures for power stations and transmission lines. The National Grid Company now has an obligation to connect a new electricity generator into the national grid, and is required to carry out its own EIA for new lines and major system upgrades. As seen in this case, this happens after the power station has been given consent, and any assessment of the environmental impact of the power lines carried out by NGC can have no influence on the decision over whether the power station should have been built in the first place. Yet the environmental impact of a power station is far more than simply its land-take, for example. Prior to the Electricity Act 1989 the then, state-owned, Central Electricity Generating Board (CEGB) considered the need for transmission lines as part of its application and consent procedures for a new power station. Indeed, the CEGB, in its evidence to the Hin-

4. 'My Council wanted the power station deferred until all the implications could be fully considered. But the Secretary of State wasn't prepared to do this. The result is that different features of the scheme, which includes pipelines and a gas cleaning plant as well as the main station and its transmission lines, come up at different stages with different approval procedures. An overall view hasn't been possible.' John Gillis, Cleveland County Planning Officer, quoted in the *Northern Echo*, 7.2.91.

5. Regulation 10 of The Electricity and Pipe-line Works (Assessment of Environmental Effects) Regulations 1990, SI No. 442.

6. Environmental statement produced by Cremer and Warner for Wilton Power Station for Teesside Power Limited, July 1990.

kley C public inquiry,[7] argued that the siting of a new (nuclear) power station in the south, rather than the north, of the country was their preferred option partly because of reduced reliance on transmission of power over long distances and lower transmission losses. The issue of transmission was clearly a central concern to the CEGB in the siting of a power station, but this essential link has been lost as a result of the new procedures established after privatisation of the electricity supply industry in 1989.

Since the EIA Directive clearly requires all direct, indirect and secondary effects of a project to be assessed, much hinges on the definition of 'project'. The environmental statement for the Wilton power station refers to the 'overall project' as including the power station and associated developments, such as the transmission lines. In this case it would appear that, because of the prevailing consent procedures, the project was divided into separate sub-projects, with the environmental impact of each part assessed separately. The complaint argued that, under the Directive, it was not appropriate to assess the impact of associated developments in isolation from the main development, including the implications of its siting.

The European Commission agreed with the principle of the complaint,[8] but was reluctant to pursue infringement proceedings against the UK in this case:

> As a general principle ... combined assessment of the effects of the construction of power plants and of any resultant power lines will be necessary in accordance with the Directive [85/337/EEC] when any such power lines are likely to have a significant impact on the environment.

This was further clarified in a later letter from the Commission to CPRE:[9]

> I can confirm that it remains the Commission's view that, as a general principle, when it is proposed to construct a power plant together with any power lines either (a) which will need to be constructed in order to enable the proposed plant to function, or (b) which it is proposed to construct in connection with the proposals to construct the power plant, *combined assessment of the effects of the construction of both the plant and the power lines in question will be necessary under Articles 3 and 5 of Directive 85/337/EEC when any such power lines are likely to have a significant impact on the environment.* (emphasis added)

The reference to articles 3 and 5 is significant since those were the basis on which CPRE had made its complaint.

For some time the question hinged on whether the power lines were required primarily to service the power station. The Government argued that they were not, yet evidence submitted by the National Grid Company to the power lines public inquiry made it quite clear that an agreement had been reached with Teesside Power Limited that the upgrading of the national grid would be made by 1995 to comply with the limited derogation from the transmission standards agreed for a temporary period only by the Office of Electricity Regulation (OFFER). Until that time, a temporary local connection to the national grid was allowed[10] which involved two 275 kV lines (0.7 km and 1 km long), from Wilton to Lackenby Substation, for which consent had been granted on 20 December 1990, without the need for an EIA. This is confirmed by the Inspectors' report[11] and, although the upgrading would also allow NGC to increase exports of electricity from Scotland to England, it is clear that the needs of the Wilton Power Station were foremost in the justification for NGC's proposals and, indeed, the specific routes themselves.

The UK Government had argued that the Directive clearly allowed for separate EIAs for power station and power transmission lines since the former was an Annex I project and the latter Annex II. While transmission lines only require EIA where they are likely to have significant effects (Articles 2 and 4(2)), the Directive is explicit in requiring an assessment of direct and *indirect* effects (Article 3) which can only be made for the power station if transmission implications are also considered. The fact that a separate EIA may or may not be required for the transmission lines does not excuse the power station EIA from identifying transmission lines as having significant environmental impact. The Commission's view above clearly runs counter to that of the UK Government.

Commission action in this case would have been consistent with precedent which suggested that the splitting of a project should be considered to be contrary to the Directive. With regard to a closely analogous situation, that of the Channel Tunnel Rail Link and Kings Cross Terminal, the Commission said in an article 169 letter to the UK Government:[12]

> The effect of dividing the London–Channel Tunnel project into the rail link on the one hand, and the terminal on the other, leads to the circumvention of Directive 85/337/EEC, since the siting of the rail link in London is no longer capable of being assessed and – for instance by the choice of another site for the terminal – its effects minimised during the consideration of the rail link route.
>
> Terminal and link are, because of the impact of the choice of the terminal site on the link, or the link on the site, indissociable. The intention to assess the link once the assessment of the impact of the terminal is over does not, therefore make acceptable the assessment of the terminal within the Private Bill procedure, which failed, contrary to Article 3 of the Directive, to take into account the effects of its siting on the choice of the rail link.

This was precisely the point being made by CPRE and others over the NGC power lines proposals and the Teesside

7. Central Electricity Generating Board (CEGB) (1988), evidence to the Hinkley C Public Inquiry.
8. Letter from European Commission to CPRE, 26 June 1992.
9. Letter from the European Commission to CPRE, 11 November 1993.
10. NGC17, evidence by the National Grid Company plc to the North Yorkshire Power Lines Inquiry, May 1992.
11. Report by the Inspectors (J. T. Graham, J. G. Lindsay) into Applications by the National Grid Company plc under the Electricity Act 1989 and the Town and Country Planning Act 1990 (file no. B50/282/2). Opening of the Inquiry 19 May 1992.
12. Infraction proceedings (under article 169 of the Treaty of Rome): letter from the Environment Commissioner to UK Government, 17 October 1991.

power station at Wilton. They are, in the words of the Commission, indissociable; the power lines would not be required were it not for the new power station, and the location of the power station is fundamental to any subsequent decision on the routes of the power lines. The same is true for the new gas pipeline and other associated developments. The impact of the power station on the environment is at least the sum of the impacts of the constituent, consequential and associated parts, and may be more than the sum (synergistic). It is the clearly stated aim of the Directive[13] to address all of these effects at the time of the main project proposal:

'A description (1) of the likely significant effects of the proposed project on the environment resulting from:

– the existence of the project ...'

'(1) This description should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the project.'

THE NORTH YORKSHIRE POWER LINES INQUIRY

Five power line proposals by the National Grid Company Plc for £200 million worth of new and upgraded 400 kV transmission lines from Lackenby (Cleveland) to Picton and on to Shipton (North Yorkshire) came before concurrent public inquiries (referred to below as 'the inquiry') in May 1992. The inquiry was held in Northallerton, Middlesbrough and Thirsk between May and November 1992 with formal inspections of the proposed routes in November and December 1992.

Since consent had been given to the power station in 1990, it was hardly surprising that many feared the decision over the power lines was likely to be a foregone conclusion. But that did not deter the public and the local authorities from fighting the proposals vigorously. At the opening of the inquiry there were well over 7000 objections outstanding including from local authorities, parish councils, MPs, local and environmental groups and individuals. A large number of further objections were received during the course of the inquiry. Key objectors included North Yorkshire County Council and other local authorities, Cleveland County Council, Rural England Versus Overhead Line Transmission (REVOLT), David Bowe MEP, Dr Marjorie Mowlam MP, The Country Landowners Association, the National Farmers Union, the Council for the Protection of Rural England (CPRE) and many individuals including farmers and local residents. Key issues included visual intrusion of pylons and overhead lines, potential health risks from electromagnetic radiation, the question of need and alternatives, and interference with farming practices. All route options passed through some of the most scenically beautiful countryside in England, especially through the Vale of York, sandwiched as it is between two national parks: the North York Moors and the Yorkshire Dales.

13. EC Directive 85/337/EEC, Annex III, paragraph 4.

Figure 1. View east across the existing line near Nether Silton towards the snow-capped North York Moors (photo: CPRE/ Derry Brabbs)

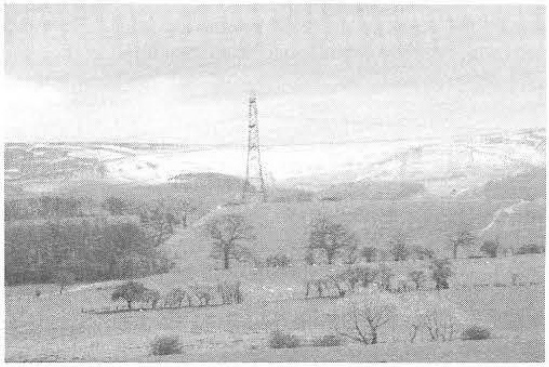

Figure 2. Expression of local opinion near Kirby Sigston, close to the North York Moors National Park boundary (photo: CPRE/Derry Brabbs)

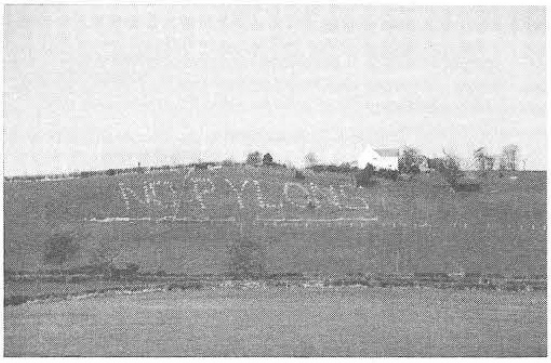

Figure 3. Existing lines marching across the Vale of York near Carlton Husthwaite (photo: CPRE/Derry Brabbs)

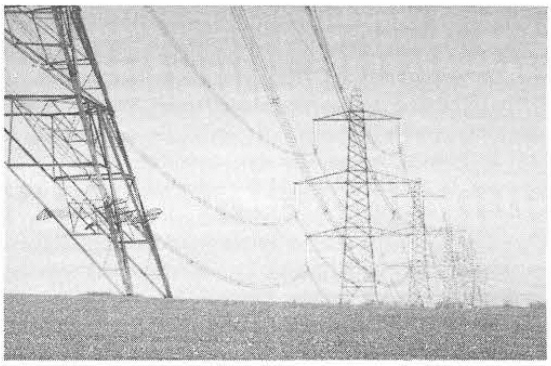

Figure 1

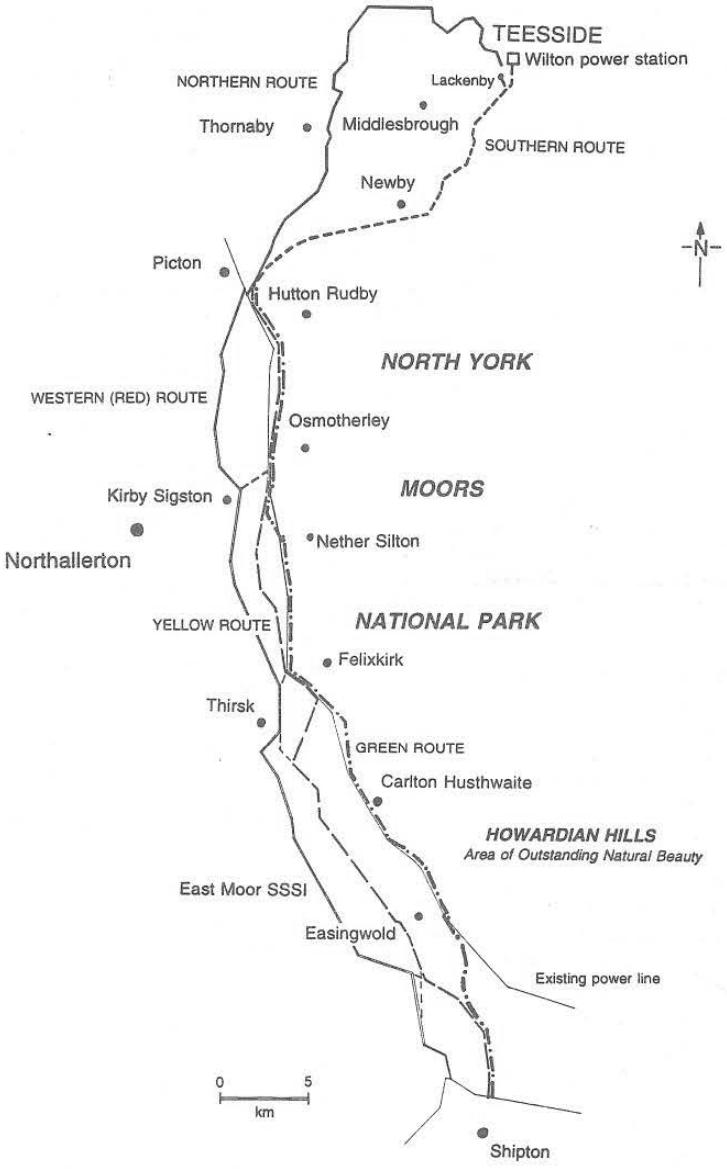

Figure 1 illustrates the route options for the proposed 400 kV overhead lines from Lackenby to Picton and Picton to Shipton. The TPL Wilton power station is located at Greystones, near Lackenby. Although temporary local connections to the national grid had been allowed, the National Grid Company was obliged by its agreement with TPL to make the necessary system upgrades to the national grid to enable the power station to export its electricity. In addition, NGC had also signed an agreement with Scottish generators to increase exports of electricity from Scotland into England (though was not obliged to do so).

Two routes were proposed between Lackenby and Picton, as alternatives to each other. The Southern route covered a distance of about 22 km and the Northern route about 30 km. Similarly, three alternative routes were proposed for the section from Picton to Shipton, all of which covered about 52–53 km in length. Although NGC had expressed its preference of routes to be the Southern route for Lackenby to Picton and the Western (Red) route from Picton to Shipton, they had

made multiple applications ostensibly to allow the inquiry to make the decision. The consequence of this multiple application, however, was that objectors, including local authorities such as North Yorkshire County Council, had only an eight-week period in which to comment on all five applications, the same as if it had been one application. In normal planning applications accompanied by an environmental statement the local planning authority has 16 weeks in which to determine the application: twice the time allowed for a planning application without an ES. However, in the case of an application to the Secretary of State for Trade and Industry for deemed planning consent,[14] a local planning authority has only eight weeks in which to comment as a statutory consultee, unless the applicant agrees to the Secretary of State granting an extension. Concern was expressed at the time by local authorities and environmental groups that this was inadequate time to consider such large and complex applications, but to no avail.[15] The approach taken by NGC may well have helped harden opposition to the proposals. The Inspectors, in their report,[16] commented:

> The multiplicity of applications considered at these inquiries undoubtedly contributed to the large number of objections and the length of the proceedings. The difficulties in identifying suitable and acceptable routes are recognised but the identification of a single preferred route, as with other linear developments such as roads, might shorten the time to decision.

This contrasts with the view of the then Secretary of State for Energy, John Wakeham:[17]

> ... it is a matter for the applicant to decide how he is going to apply for my consent within the requirements of the relevant legislation. I am fully satisfied that the form of NGC's applications is consistent with the statutory provisions governing such applications.

The complainant, the CPRE, argued at the public inquiry[18] into the power lines that the unacceptable visual intrusion which the proposed transmission lines would bring should have been foreseen at a much earlier stage. CPRE argued that these impacts were unacceptable and urged the Inspectors to reject the applications for consent on visual grounds. In so doing, CPRE also urged the Inspectors to comment on the procedures which brought about this situation, and that the Inspectors should not feel obliged to grant consent for the power lines simply because consent for the power station had already been granted and it was already being built. Teesside Power Ltd neither had to demonstrate the full environmental implications of the siting and development implications of the power station, nor to bear the full economic and environmental costs. Limits on the costs that can be passed by the NGC to individual generating projects mean that NGC are likely to seek to develop the cheapest options, since additional costs to minimise the environmental impact will have to be borne by NGC and not the 'polluter' – Teesside Power Ltd.

NGC are faced with an apparent *fait accompli* of having to connect a generator to the national grid, but neither they, nor anyone else, has the opportunity to object to the siting of the power station requiring connection because the power line implications of the power station are excluded from the EIA and consideration under the existing consent procedures. In this case, had they been included they may have tipped the balance as to whether consent should have been granted instead at an alternative site closer to existing grid capacity, if new capacity was needed at all.

The inquiry ended in December 1992. The Inspectors' report was finally published in May 1994, some eight months after having been received by the Secretary of State for Trade and Industry, Mr Michael Heseltine.

The Inspectors endorsed CPRE's view on the EIA issue:[19]

> ... it seems to us that to site power stations without taking into account all relevant factors, including transmission to the areas of consumption, is likely to lead to the extension of high voltage power lines through areas currently not affected and the reinforcement of lines in areas already affected. It is not disputed that in view of the scale and form of the towers these lines are inevitably highly intrusive and damaging to almost any landscape and as a result are unwelcome.
>
> It appears to us that there is a strong case for consideration to be given to the introduction of procedures to ensure that consents for future power stations take account of the resulting transmission requirements, and the environmental impact of any necessary extension or reinforcement of the National Grid, between the proposed generating plant and areas of consumption.

The Inspectors recommended approval of the Southern route (Lackenby to Picton) with some exemptions, notably near Newby, and the Western (Red) route (Picton to Shipton) except around East Moor SSSI and that a switch to the Yellow route was preferable for the southernmost section. The Secretary of State in his provisional decision letter was minded to follow the Inspectors' recommendations, subject to NGC obtaining the necessary wayleave agreements with local landowners. This in itself involved a number of further public hearings since few landowners were willing to accept voluntarily annual site rental payments of £80 per pylon and one-off incentive payments of £300 per pylon and £200 for overhead lines. Only 25 out of 138 wayleaves were obtained in this way.[20] So, in November 1994 a seven-week programme of hearings began with DTI inspectors. The Secretary of State's decision on the compulsory wayleaves was expected around March 1995. However, the matter is far from closed, since the Secretary of State was minded to accept the recommendations of the Inquiry Inspectors that

14. Electricity (Application for Consent) Regulations 1990, SI No. 455. By 1992 the Department of Energy had been absorbed into the Department of Trade and Industry.
15. Letter from CPRE to Secretary of State for Energy, 26 September 1991.
16. page 223, para. 27.7, Inspectors' report
17. Letter from John Wakeham, Secretary of State for Energy to CPRE, 3 October 1991.
18. *Supra* notes 3, and 11 (pp. 5–6).
19. Inspectors' conclusions, paras 27.5–27.6 (23.9.93).
20. Tighe, C. (1994) Farmers fight National Grid over pylon upgrade, *Financial Times,* 1 November.

consent should not be granted for the section near Newby in the north and East Moor in the south. While NGC hoped they could develop alternative routes for these two sections without resort to another public inquiry, this was not possible given the opposition of local authorities, environmental groups and landowners. A public inquiry into the two remaining sections opened on 7 March 1995 and lasted for about six weeks. This new inquiry was notable for the intervention of another electricity generator – PowerGen – arguing that the temporary connection was satisfactory and that Scottish exports would be uneconomical. This, they argued, rendered the transmission line upgrades unnecessary and that they should not be made on the basis of mythical applications for new generators which may never happen. Opposition has far from abated which means this case is likely to run for some considerable time yet.

RESOLVING POOR IMPLEMENTATION OF THE EIA DIRECTIVE

The complaint described above presents a persuasive case that the present procedures for consent approval in the Electricity Supply Industry (ESI) run counter to both the spirit and letter of the EIA Directive. The fact that the Commission has taken no action does not mean there is not a case to answer. The Commission inevitably operates in a highly political arena and this complaint may have suffered by its temporal proximity to other highly publicised and controversial actions at the time (Twyford Down, Oxleas Wood). The fact that the Commission has decided not to pursue legal action does not mean there was not a case of infringement: the Commission is under no obligation to do so and there is little chance of legal remedy against the Commission.[21] Legal action by the Commission would probably have meant that the Electricity Act 1989 would have to be amended, or at the very least the Electricity EIA Regulations. The Commission's statement of principle above, however, implies that the UK will have to amend its implementation of EIA for power plants and power lines if it is not to face possible legal action in future.

Given the Commission's view and the very clear recommendation of the Inquiry Inspectors in line with the view of the complainant, CPRE, it is astonishing that the Secretary of State, in his provisional decision letter to the National Grid Company,[22] felt able to dismiss the issue by saying that:

'... the current procedures, under which individual developments are considered as separate applications, operate satisfactorily.'

There seems to be little justification for the Government's continued opposition to remedying this anomalous situation which has arisen as a consequence of the passing of the Electricity Act 1989. In successive discussions and correspondence with the Department of Trade and Industry since 1992, CPRE suggested a simple amendment to the Electricity and Pipe-line Works (Assessment of Environmental Effects) Regulations 1990 (SI 442) which would enable the implications of resultant power lines and other infrastructure to be identified at the time of new power station proposals.

The amendment suggested[23] is:

'Page 2, Regulation 3, insert:

"(3) Pursuant to paragraph 1 (a) above an environmental statement shall include information regarding the overall implications for, and impact of, power transmission lines and other infrastructure associated with the generating station where these are likely to have significant effects on the environment."'

This would seem to be the simplest way of meeting the recommendations of the Inquiry Inspectors and the requirements of EC Directive 85/337/EEC for an EIA to consider the direct, indirect and secondary effects of a proposal and would comply with the principle expressed by the European Commission above. This would not pre-judge an EIA for the detailed power line proposals themselves, but the main implications of any associated power lines or other infrastructure should be addressed at the time of the power station EIA. Where power lines or other associated infrastructure are likely to have a significant impact on the environment these impacts should be material considerations in whether consent for the power station should be given and the Secretary of State should be aware of these before granting consent. The consequence of such an amendment would be to ensure that power station proponents were forced to consider the transmission implications of their proposals and that they would form part of the EIA and of any subsequent public inquiry. It would begin to reduce the difficulties which arise over the definition of projects and programmes.

This is an ongoing saga, since it continues to draw a blank from the Department of Trade and Industry and from the European Commission who appear as reluctant as ever to take any further action. Yet its significance should not be underestimated. The level of opposition to the power line proposals and the failure of the EIA procedures for the power station to have identified their impact sooner is clearly illustrated by the Inspectors' report and the fact that they recommended that consideration be given to amending the procedures. Since it was not specifically within the remit of the inquiry itself for the Inspectors to address Government policy and procedures, they were clearly reflecting the level of concern expressed at the inquiry, and believed they were on firm ground, in feeling able to comment on what was inevitably a key issue for the inquiry: why was it having to happen at all when the implications should have been foreseen much earlier?

21. See *Alfons Lutticke GmbH et al* v *Commission* Case 48/65 (1966) ECR 19 and *Lord Bethell* v *Commission* Case 246/81 (1982) ECR 2277.

22. Paragraph 6 of the provisional decision letter from the Secretary of State for Trade and Industry to the National Grid Company, 12 May 1994, ref. OL253/52-56.

23. Letters to Mr Tim Eggar, Minister for Energy, Department of Trade and Industry, from CPRE dated 22 February 1993 and 24 May 1994.

LESSONS FOR THE EUROPEAN UNION

The case above highlights a larger problem with the EIA Directive and that is the ambiguity of its definition of 'project'. When is a project a programme and when is it a sub-project? Unless this issue is resolved EIAs for power stations in the UK and other infrastructure projects across the EU will continue to fail to address some of the potentially most significant impacts flowing from such developments. The EIA Directive will have singularly failed in its prime objective: that all direct and indirect effects of a project will have been assessed prior to consent being given. UK implementation failed to ensure that happened in this case and so far there has been no attempt to prevent the same problems arising in future.

Although the EIA Directive is currently undergoing review, the European Commission has chosen not to propose any clarification to the definition of 'project'. This has, nevertheless, been the basis for many complaints to the Commission (including several from the UK and a recent German case[24]) concerning road schemes and, as we have seen, other infrastructure projects, specifically over whether a larger project can be split up into smaller schemes for the purpose of applying the EIA Directive. The Commission could usefully take this opportunity to clarify that a project means the overall project including associated developments, not simply the smallest component into which the project can be broken down. It should be remembered that the whole *raison d'être* behind the Directive is that

'... effects on the environment [should be taken] into account at the earliest possible stage in all the technical planning and decision-making processes...'[25]

This admirable sentiment cannot be achieved if EIA is applied only at the *latest* stage, e.g. individual schemes of a larger road project or upgrading of an entire route; or for overhead power lines after the decision to locate a power station has been made without any consideration of the power line implications.

A suitable re-definition of 'project' might be:[26]

Article 1 (2)
'"project" means:
- the execution of construction works or of other installations or schemes, *including associated or component schemes where part of an overall project*,
- other interventions in the natural surroundings and landscape including those involving the extraction of mineral resources;'

(amendment emphasised)

Such an amendment would resolve the problem in the UK Electricity Supply Industry described above, although it is still likely to require subsequent amendment of the Electricity EIA regulations in order to implement it fully. However, since power stations over 300 MW capacity fall within Annex I of the Directive (mandatory EIA) a strong case could be made that a suitably amended project definition in the Directive would have direct effect even without amended UK regulations.[27]

The issue of direct effect might have been pursued by the complainant CPRE even without a clearer definition of project, but wasn't at the time because of the potential cost implications of losing a judicial review. EIA case law in the UK at that time was, and still is, quite limited and not entirely encouraging to potential litigants; courts are inevitably reluctant to overturn decisions of Secretaries of State. However, most commentators and case law[28] do suggest that the EIA Directive can be said to have direct effect at least for Annex I projects which have a mandatory EIA requirement: the Directive can be said to be unconditional and sufficiently precise in this respect. In the case of the Wilton power station, there is a strong argument that the UK implementing regulations fail to fully implement the Directive. Since the application for the power station had been made on 10 July 1990, it was well after the Directive was supposed to have been implemented (3 July 1988) and so it could be argued that the Directive, which clearly requires an assessment of direct and indirect effects, should have direct effect for a power station project such that transmission implications should have been considered. The same principle might apply to other Annex I infrastructure projects, such as motorway schemes, so that the interpretation of the existing definition of project would depend more on what was required to enable direct and indirect effects to be assessed – i.e. meet the objectives of the Directive – than on the prevailing consent procedures in the Member State concerned.[29]

With the political will, of course, a re-definition of 'project' as 'activity' or 'action' (echoing the much broader terminology used in the US National Environmental Policy Act 1969) might enable the principles of the EIA Directive to be extended to more strategic decision levels, such as programmes, plans, policies and legislation. Unfortunately, given the current political climate of the European Union,

24. ECJ Case C-396/92, *Bund Naturschutz and others*.

25. Preamble to Directive 85/337/EEC.

26. See Sheate, W.R. (1995), Amending the EC Directive (85/337/EEC) on Environmental Impact Assessment, [1995] EELR, 77–82 (March 1995).

27. See Kramer, L. (1991) The Implementation of Community Environmental Directives within Member States: Some Implications of the Direct Effect Doctrine, [1991] JEL 39–56; Macrory, R. B. (1992) Environmental Assessment and EC Law: Case Law Analysis of *Twyford Parish Council* v *Secretary of State for the Environment and Secretary of State for Transport* and *Petition of Kincardine and Deesside District Council*, [1992] 4 JEL 298–304; and Sheate, W. R. (1994) *Making an Impact: A Guide to EIA Law and Policy*, Cameron May, London.

28. *Supra* note 27 and see *Twyford Parish Council* v *Secretary of State for the Environment and Secretary of State for Transport* (1990) [1992] 4 JEL 273; and *Petition of Kincardine and Deesside District Council* (Court of Session, 8 March 1991), [1992] 4 JEL 289.

29. Article 2 (2) of the Directive states:
'The environmental impact assessment may be integrated into the existing procedures for consent to projects in the Member States, *or, failing this, into other procedures to be established to comply with the aims of this Directive*.' (emphasis added)

there seems little likelihood of that happening during this revision of the Directive. Yet only a tiered system of EIA and strategic environmental assessment (SEA) addressing all decision levels will remove once and for all the problem of defining boundaries between those levels. Had SEA been in place for legislative proposals, as in some US states, the anomalies arising from the splitting of consent procedures in the Electricity Act 1989 might have been identified and avoided in the first place.

For the time being there appears to be stalemate on this issue. Given the reluctance for movement by the UK Government, it may have to await a similar case in the future to be taken before judicial review, unless the Council of Ministers can be persuaded to amend the Directive itself and remove ambiguity in this area once and for all.

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Appendix 6

SHEATE, W R (1996a) The Search for a UK Nuclear Waste Disposal Facility: A Case Study of Disputed Project Definition Under the EC Directive 85/337/EEC on EIA. *Environmental Policy and Practice*. Vol. 6(2): 75-86.

The Search for a UK Nuclear Waste Disposal Facility: A Case Study of Disputed 'Project' Definition Under the EC Directive 85/337/EEC on EIA

W. R. Sheate

The definition of 'project' under the EC Directive 85/337/EEC on EIA has proved to be problematic for a number of EU Member States, resulting in a number of recent European Court of Justice cases. These, however, represent merely the tip of the iceberg – many more examples never getting as far as the ECJ. Furthermore, the European Commission and Council of Ministers have to date rejected any attempts to amend the current definition to encompass 'associated or component' developments which might help resolve many of the problems. This paper examines the legal and policy background to this problem and focuses on one specific case study, that of the UK Nirex Ltd. proposal for a Rock Characterisation Facility (RCF) on the edge of the Lake District National Park in Cumbria, UK. Linked closely to the issue of project definition is the consideration of alternatives in EIA. Should alternatives be seen as 'the heart of the EIA process' as in the US or merely as a discretionary option for the developer to decide?

I INTRODUCTION

A critical problem experienced with implementing the Environmental Impact Assessment (EIA) Directive[1] in Europe has been the definition of what is meant by 'project'. When is a project a project and when is it a programme? This problem is inevitably exacerbated by the lack of formal strategic environmental assessment (SEA) procedures and a lack of formal scoping required under the present Directive. While SEA would address the difficult overlap area between projects, programmes and plans consistent and contiguous legislation covering both project EIA and programmes, plans and policies is unlikely in the foreseeable future. The interface between projects and programmes (consisting of a number of sub-projects) is therefore a real problem which needs resolving urgently.

The European Community (EC) Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, was agreed and notified to Member States in July 1985 and formal compliance was due on 3 July 1988. Although legally confined to EC Member States a number of other European countries have chosen to establish similar procedures or are considering doing so. The Directive is a procedural one, which seeks to ensure that before a decision is made about whether consent should be given to go ahead with a development a minimum level of information about the likely significant effects on the environment has been provided to the 'competent authority' (for example, a local authority or government minister) making the decision. It does not in itself require a Member State to refuse to give consent for a project even if it is likely to be highly damaging to the environment. In principle, the Directive applies equally across all policy sectors by providing a framework within which Member States must act.

Projects likely to have significant effects on the environment by virtue *inter alia* of their nature, size or location must be made subject to an assessment of their effects before consent is given. There are two lists of projects: Annex I projects require EIA in all cases and include major chemical works, power stations, motorways, etc.; Annex II projects must be subject to assessment where Member States consider their characteristics so require. Annex II covers the majority of development projects subject to various criteria and thresholds according to the individual Member State. This leads to considerable variation throughout the EC in the extent to which the Directive is implemented and its effectiveness in requiring EIA for any project likely to have significant effects on the environment – the ultimate test. Inevitably, these discrepancies in implementation occur both within sectors and among sectors across the Community. The direct and indirect effects of the proposed project on the following four factors must be identified, described and assessed, where appropriate:

- human beings, fauna and flora;
- soil, water, air, climate and the landscape;
- the interaction between the first two groups;
- material assets and the cultural heritage.

Information supplied by the developer and gathered as a result of consultations must be taken into account in the decision-making process. Although the Directive studiously

1. European Community Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, OJ (1985) L175, pp. 40-48, 5.7.85.

avoids reference to a formal impact statement, such a document is mentioned in the implementing legislation of many Member States. The developer must supply a minimum level of information and may supply additional information where appropriate. The minimum information is:

- a description of the project with information on site, design and size;
- the data required to identify and assess the main effects which the project is likely to have on the environment;
- a description of the measures envisaged to avoid, reduce and possibly remedy significant adverse effects;
- a non-technical summary of the above information.

Annex 3 provides further guidance on information to be supplied, including, where appropriate, an outline of the main alternatives studied and the reasons for the developer's choice. The description of effects should consider direct effects and any 'indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the project'.

Article 1 defines 'project' as:

- the execution of construction works or of other installations or schemes,
- other interventions in the natural surroundings and landscape including those involving the extraction of mineral resources.

However, this definition is unclear and insufficient when it comes to the situation where a project comprises sub-projects or is part of a larger or longer-term project. A suggested alternative definition[2,3] is that the first part be amended by the addition after '... installations or schemes ...' of:

> 'including associated or component schemes where part of an overall project'.

This issue has been the subject of considerable debate in Member States and in the European Court of Justice over recent years. This paper examines EU and UK case law on this issue and focuses particularly on one individual case study – that of UK Nirex's proposal for a pre-repository rock characterisation facility (RCF) in Cumbria, on the edge of the Lake District National Park. This case study has exemplified the problems inherent in a narrow interpretation of the definition of project. The background, and subsequent public inquiry in 1995/1996, are instructive and provide some clear lessons for legislators and policy makers in the UK and EU.

Closely linked to the definition of project is the issue of the consideration of alternatives. A narrow definition of project severely restricts the scope for considering alternatives adequately. The Directive is also less than clear on the extent to which alternatives should be addressed in an EIA. Even the current proposal by the European Commission to amend the Directive (COM (95) 720 final)[4] contains only a modest improvement in the consideration of alternatives by moving the requirement from the more discretionary Annex III to Article 5 which specifies the minimum information which must be provided. The wording, however, remains the same.

II BACKGROUND: THE INTERPRETATION OF THE LETTER AND SPIRIT OF THE EIA DIRECTIVE

It is important in assessing the quality of the EIA process and whether it complies with EC law, to consider the relevance of previous cases of complaints which have come before the European Commission and the European Court of Justice. The relevance of wider EC environmental policy and international best practice may also be relevant. On the one hand there is the question of whether a particular EIA process has met the formal requirements of the EC Directive 85/337/EEC. On the other hand is the question of whether the procedures followed in a particular case meet or come close to what one might regard as best practice. This is especially true when dealing with a government agency, which one would hope to comply with the principles of international agreements and conventions to which the government is a signatory and to take a lead in following best practice in EIA which is urged by government on others.

International best practice

Since the birthplace of EIA was the United States of America it is instructive to look at best practice and legal requirements there under the National Environmental Policy Act 1969 (NEPA).[5] NEPA has since been copied, elaborated and modified across most states of the US. NEPA itself goes beyond simply development projects to encompass 'major federal actions'. However, the consideration of alternatives is at the heart of EIA in the US as the following statements taken from NEPA and the NEPA Guidelines and the Council on Environmental Quality (CEQ) regulations for implementing NEPA testify.

One of the requirements of NEPA is that an environmental impact statement shall include information on 'alternatives to the proposed action'. NEPA Guidance (May 1993)[6] includes:

> The failure to consider alternatives that seem reasonable affects the credibility of an otherwise adequate NEPA review. CEQ's regulations state that the comparative analysis of alternatives, including the proposed action, is the heart of the EIS (40 CFR 1502. 14) and requires a rigorous exploration and objective evaluation of reasonable alternatives, including the no action alternative. CEQ states that reasonable alternatives include those that

2. Sheate, W.R. (1995) Amending the EC Directive (85/337/EEC) on environmental impact assessment, *European Environmental Law Review*, 4 (3), pp. 77-82.
3. Sheate, W.R. (1995) Electricity generation and transmission: a case study of problematic EIA implementation in the UK, *Environmental Policy and Practice*, 5 (1), pp. 17-25.
4. Amended proposal for a Council Directive amending Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, COM (95) 720 final.
5. US National Environmental Policy Act 1969 §4332.
6. *NEPA Guidance: Recommendations for the Preparation of EIAs and EISs*, May 1993.

are practical or feasible from a common sense, technical and economic standpoint.

Significantly the Guidance goes on to expand on the issue of improper segmentation:

CEQ's regulations (40 CFR 1508.25 (a)) state that an agency should analyze 'connected actions' and 'cumulative actions' in one EIS. An agency should also analyze 'similar actions' in one EIS when that is the best way to assess adequately the combined impacts of the similar actions or reasonable alternatives.

'Connected actions' are those that automatically trigger other actions that may require EISs, cannot proceed unless other actions are taken previously or simultaneously, or are interdependent parts of a larger action and depend on the larger action for justification. 'Cumulative actions' are those that when viewed with other actions proposed by the agency have cumulatively significant impacts and therefore should be discussed in the same EIS. 'Similar actions' are those that when viewed with other reasonably foreseeable or proposed agency actions have similarities that provide a basis for evaluating their environmental impacts together, such as common timing or geography.

The CEQ Regulations themselves state:

Sec. 1502.14 Alternatives including the proposed action

This section is the head of the environmental impact statement ... it should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision-maker and the public. In this section agencies shall:

(a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.

(b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.

(c) Include reasonable alternatives not within the jurisdiction of the lead agency.

(d) Include the alternative of no action.

(e) Identify the agency's preferred alternative or alternatives ...

The treatment of alternatives is then 'at the heart of the environmental impact statement'. This sentiment is repeated in the Netherlands – generally considered to have one of the better of the European EIA systems:

To the best of his knowledge the initiator must indicate in the environmental impact statement what reasonable alternatives there are to the goal he has in mind. As soon as he indicates a preference for one of the alternatives, that alternative is regarded from then on as the proposed activity. The preference must be the result of an explicit weighing of the pros and cons of all the alternatives. It is only thus that one can ensure careful consideration of the environmental repercussions of the plan. The nature and scope of the alternatives will differ from case to case. In some cases the 'do nothing' alternative (the zero alternative) can also be realistically considered.[7]

The Environmental Protection (General Provisions) Act 1986 (and subsequent legislation) which established EIA in the Netherlands includes in its requirement for an environmental impact report (statement):

...(b) a description of the proposed activity and of the manner in which it will be carried out, as well as of the alternatives thereto, which must reasonably be taken into consideration;

(c) an indication of the decisions during the preparation of which the environmental impact statement shall be made, and a review of the decisions previously taken by government bodies, relating to the proposed activity and the alternatives described;

(d) an indication of the existing condition of the environment, insofar as the proposed activity or the alternatives described may have consequences for the said condition, as well as the expected development of the said environment in the event of neither the said activity nor the alternatives being undertaken;

(e) a description of the consequences which the proposed activity or the alternatives described may have for the environment, as well as an indication of the way in which the said consequences have been determined and described;

(f) a comparison of the expected development of the environment, as described in pursuance of subsection one, under d, with the described consequences of the proposed activity on the environment, as well as with the described consequences for the environment of each of the alternatives taken into consideration ...

etc ...

The importance of an adequate consideration of alternatives in the Dutch EIA system – an example of better (if not best) practice in Europe – is self-evident.

As far as UK commitments[8] are concerned, the most obvious international agreements relevant to EIA are the Rio Declaration and Agenda 21,[9] signed in 1992, which encourage the extension of EIA beyond projects to policies and plans, and the EC's Fifth Environmental Action Programme[10] which stresses the importance of preventative measures and the integration of the environment into all policy areas.

EC case law and previous cases of complaint

A case which came before the European Court of Justice regarding a new German motorway raised the question of the definition of project, i.e. legality of the splitting of an overall project into smaller sections for consent and assessment purposes (*Bund Naturschutz and others*, Case C-396/92).[11] The

7. From: *Environmental Impact Assessment: The Netherlands – fit for the future*. Ministry of Housing, Physical Planning and Environment, and Ministry of Agriculture and Fisheries (1989).

8. UK Government (1994) *Sustainable Development: the UK Strategy*, Cm 2426, January 1994, HMSO, London.

9. United Nations Conference on Environment and Development (UNCED) (1992), Agenda 21.

10. Commission of the European Communities (1992) *Fifth Action Programme on the Environment: Towards Sustainability, A European Community Programme of Policy and Action in Relation to the Environment and Sustainable Development.*

case was referred to the European Court of Justice by the Bavarian Higher Regional Administrative Court. Unfortunately, the European Court avoided addressing this specific question (since it was only required to be answered if the answer to another question made it necessary) and therefore failed to clarify how the definition of project under the Directive should be interpreted. The Advocate General, however, in his earlier report to the Court (May 1994) stated:

> ...the purpose of the directive should not be lost by the projects which should be subject to an environmental impact assessment being given a form which renders an environmental impact assessment meaningless. The Member States must ensure that the obligation to carry out an environmental impact assessment is not circumvented by a definition that is over-strict or otherwise inappropriate, in the light of the purpose of the directive, of the projects in respect of which application must be made.
>
> The important question is ... whether, in connection with the environmental impact assessment of the specific project, there is an obligation to take account of the fact that the project forms part of a larger project, which is to be carried out subsequently, and in the affirmative, the extent to which account is to be taken of that fact.
>
> The subject-matter and content of the environmental impact assessment must be established in the light of the purpose of the directive, which is, at the earliest possible stage in all the technical planning and decision-making processes, to obtain an overview of the effects of the projects on the environment and to have projects designed in such a way that they have the least possible effect on the environment. *That purpose entails that as far as practically possible account should also be taken in the environmental impact assessment of any current plans to extend the specific project in hand.*
>
> For instance, the environmental impact assessment of a project concerning the construction of the first part of a power station should, accordingly, involve the plans to extend the station's capacity fourfold, when the question of whether the power station's site is appropriate is being assessed.
>
> Similarly, when sections of a planned road link are being constructed, account must be taken, in connection with the environmental impact assessment of the specific projects of the significance of those sections in the linear route to be taken by the rest of the planned link road.
>
> (emphasis added)

In the *Grosskrotzenburg* case in Germany (*Commission v Federal Republic of Germany* (Case C431/92)[12] the dispute was over whether the project in question was an Annex 1 project in its own right (and therefore required mandatory EIA) or a modification to a project and therefore an Annex II project which may be subject to EIA. Germany argued that the construction of a new block at the power station did not constitute a project under Article 4 (1) of the Directive, but was a modification of a project under paragraph 12 of Annex II, which according to Article 4 (2) may, rather than must, be made subject to EIA. The court held that, by virtue of paragraph 2 of Annex I, projects for thermal power stations with a heat output of 300 MW or more must undergo a systematic assessment. For the purposes of this provision, such projects must be assessed irrespective of whether they are separate constructions, are added to a pre-existing construction or even have close functional links with a pre-existing construction. Since the project in question was a power station of 500 MW, the Court found that it was a project within the meaning of Article 4 (1) and Annex I of the Directive.

In the case of a complaint made by the Council for the Protection of Rural England (CPRE)[13] regarding the EIA for Wilton Power Station, Teesside and associated power transmission lines (Complaint no. P92/4891), the Commission agreed with the principle that, under the Directive, the ES for a power station should address power line implications where there are likely to be significant effects:

> As a general principle ... combined assessment of the effects of the construction of power plants and of any resultant power lines will be necessary in accordance with the Directive [85/337/EEC] when any such power lines are likely to have a significant impact on the environment.[14]

This was further clarified in a later letter from the Commission to CPRE:

> I can confirm that it remains the Commission's view that, as a general principle, when it is proposed to construct a power plant together with any power lines either (a) which will need to be constructed in order to enable the proposed plant to function, or (b) which it is proposed to construct in connection with the proposals to construct the power plant, *combined assessment of the effect of the construction of both the plant and the power lines in question will be necessary under Articles 3 and 5 of Directive 85/337/EEC when any such power lines are likely to have a significant impact on the environment.*[15]
>
> (emphasis added)

The Inquiry Inspectors at the subsequent North Yorkshire Power Lines Inquiry endorsed the complainant's (CPRE's) view on the EIA issue:[16]

> ... it seems to us that to site power stations without taking into account all relevant factors, including transmission to the areas of consumption, is likely to lead to the extension of high voltage power lines through areas currently not affected and the reinforcement of lines in areas already affected. It is not disputed that in view of the scale and form of the towers these lines are inevitably highly intrusive and damaging to almost any landscape and as a result are unwelcome.
>
> It appears to us that there is a strong case for consideration to be

11. *Bund Naturschutz in Bayern eV, Richard Stahnsdorf and Others v Freistaat Bayern*, Case C-396/92): Opinion of Advocate General Gulmann, delivered on 3 May 1994; Judgement of the European Court of Justice, 9 August 1994.
12. *Commission v Federal Republic of Germany* (Grosskrotzenburg Case C-431/92), 11 August 1995.
13. *Supra* note 3.
14. Letter from European Commission to CPRE, 26 June 1992.
15. Letter from the European Commission to CPRE, 11 November 1993.
16. Inspectors' conclusions, paras. 27.5-27.6 (23.9.93).

given to the introduction of procedures to ensure that consents for future power stations take account of the resulting transmission requirements, and the environmental impact of any necessary extension or reinforcement of the National Grid, between the proposed generating plant and areas of consumption.

With regard to a closely analogous situation, that of the Channel Tunnel Rail Link and Kings Cross Terminal, the Commission said in an Article 169 infringement letter to the UK Government:[17]

> The effect of dividing the London-Channel Tunnel project into the rail link on the one hand, and the terminal on the other, leads to the circumvention of Directive 85/337/EEC, since the siting of the rail link in London is no longer capable of being assessed and – *for instance by the choice of another site for the terminal* – its effects minimized during the consideration of the rail link route.
>
> Terminal and link are, because of the impact of the choice of the terminal site on the link, or the link on the site, indissociable. The intention to assess the link once the assessment of the impact of the terminal is over does not, therefore make acceptable the assessment of the terminal within the Private Bill procedure, which failed, contrary to Article 3 of the Directive, to take into account the effects of its siting on the choice of the rail link.
>
> (emphasis added)

UK case law

Unfortunately, there is little UK case law on the interpretation of the requirement under Directive 85/337/EEC regarding the definition of project and even less on the issue of alternatives. Most case law on EIA has been concerned with whether an assessment was required.

The first is the earliest EIA case of *R v Swale Borough Council and the Medway Ports Authority* ex parte *the Royal Society for the Protection of Birds* (1991)[18] in which the RSPB challenged the granting of planning permission by Swale Borough Council to the Medway Ports Authority for land reclamation of mudflats important for wintering birds (Lappel Bank), which was part of a larger scheme involving the construction of a storage area for cargo and a marina, on the grounds that it was a breach of both the EIA Directive and the EC Birds Directive.

The construction of a storage area for cargo and a marina might be considered to fall with Annex I (trading ports) or Annex II (harbours etc. not in Annex I). Simon Brown J. held that the question must be answered strictly in relation to the development applied for, not any development contemplated beyond that.

However, he also held that the further question arising in respect of a Schedule 2 development, whether it 'would be likely to have significant effects on the environment by virtue of factors such as its nature, size or location' should be answered rather differently. He went on to say:

> The proposal should not then be considered in isolation if in reality it is properly to be regarded as an integral part of an inevitably more substantial development. This approach appears to me appropriate on the language of the regulations, the existence of the smaller development of itself promoting the larger development and thereby likely to carry in its wake the environmental effects of the latter. In common sense, moreover, developers could otherwise defeat the object of the regulations by piecemeal development proposals.

The judge held that the question of whether an EIA is required or whether a project falls within Schedule 1 or 2 of the EIA Regulations was exclusively for the planning authority to decide subject only to traditional Wednesbury challenge (unreasonableness).

Although the Marleasing decision (*Marleasing v La Commercial Internacional de Alimentacion* (November 1990))[19] had not yet been decided by the European Court of Justice regarding the doctrine of sympathetic interpretation (the duty to interpret national law in conformity with Community law), the principle that national legislation which is intended to implement Community measures must be interpreted in conformity with the parent Community legislation had been established in the case of *von Colson and Kamman v Land Nordrhein Westfalen* (1984).[20] This principle had also been accepted and applied in the English courts on a number of occasions prior to the domestic EIA cases.[21] The *Swale* judgment therefore would appear to contradict key principles of European Community law, i.e. it is not just for the planning authority to decide, it depends on whether the proposed project is likely to have significant effects. Arguably this also illustrates the lack of familiarity at the time of the English courts with European environmental legislation.

On the issue of segmentation of projects the *Swale* judgement would appear consistent with the view of the Advocate General above (even though in the *Swale* case itself the overall judgement went the other way since the case rested on whether the regulations properly implemented the Directive).

Other relevant case law has largely been confined to road proposals and the common practice (as we have seen, not just in the UK) of splitting road schemes into small sections for consent and assessment purposes.

This arose in *R v Secretary of State for Transport* ex parte *Surrey County Council* (unreported, 1993)[22] in relation to proposals by the Department of Transport to widen and add three-lane link roads alongside the M25 motorway in Surrey which would have resulted in a highway of 14 lanes in total. Surrey County Council applied to the High Court to seek permission to bring the decision of the Secretary of State to pro-

17. Letter from the Environment Commissioner to UK Government, 17 October 1991.

18. *R v Swale Borough Council and the Medway Ports Authority* ex parte *RSPB etc.* (1990) 3 JEL 135 (1991).

19. *Marleasing v La Commercial Internacional de Alimentacion* (1990) ECR 4135.

20. *von Colson and Kamman v Land Nordrhein Westfalen* (1984) ECR 1891.

21. Ward, A. (1993) The right to an effective remedy in European Community law and environmental protection: a case study of United Kingdom judicial decisions concerning the Environmental Assessment Directive, *Journal of Environmental Law*, 5 (2), pp. 221 -244.

22. *R v Secretary of State for Transport* ex parte *Surrey County Council*, 24 November 1993, Royal Courts of Justice (CO 2829/93), Judgement of Mr Justice MacPherson of Cluny in the High Court.

pose the roads before judicial review on the grounds that under the EIA Directive the proposed 'improvements' to the M25 between junctions 10 and 21 should be treated as one project, not as several separate schemes as intended by the Department of Transport. Their application for judicial review was refused on the grounds that the application was premature, since there was as yet no environmental statement. In his decision the judge said that a new motorway over green fields could not be split up into individual schemes for the purposes of EIA, whereas an improvement of an existing motorway could be so split up. Surrey County Council argued that it is stretching the imagination to call the proposals for the M25 simply an improvement. However, MacPherson J. accepted at least part of their argument, adding:

> It seems to me that any environmental assessment in connection with the present project, which is junctions 12 to 15, must take into account and cover possible developments in the future.

Should the Department fail to incorporate such plans into the assessment Mr Justice MacPherson suggested that Surrey County Council and the public affected would have cause to reapply to the court. He continued:

> I have no doubt that if the environmental assessment simply covered junctions 12 to 15 and did not encompass the environmental effects of the increased traffic which might occur in the future, Surrey County Council would have very powerful arguments at the inquiry which will take place in the summer of 1994. In other words I do not envisage the possibility of the environmental assessment which will be made not covering possible alterations occurring between junctions 10 and 11 and junctions 12 and 21 in connection with possible future road widening. Otherwise I can see that the residents of Egham, or whatever the area is which is encompassed between 12 and 15, would have a grumble. They might then be able to say, 'when we were faced with a public inquiry in respect to junctions 12 to 15 there was a complete cut-off of consideration about any future problems and any future improvements which might take place'.

The issue also arose, though was rightly rejected, in the UK courts in the case of *R v Secretary of State for the Environment* et al. ex parte *Greenpeace and Lancashire County Council* (CO3561/93).[23] The applicants for judicial review argued (perhaps rather tortuously) that the proposed thermal reprocessing plant (THORP) at Sellafield, Cumbria was actually two projects: one being the construction, and the other being the bringing into operation of the processes within THORP thereby causing emissions. The Court held that THORP was only one project, not two, and (relying on the case of *Twyford Parish Council v Secretary of State for the Environment and Secretary of State for Transport* (1990))[24] since its commencement had begun long before the Directive came into force, that the Directive did not apply to projects in the pipeline.

23. Yongo, T. (1994), A Note on the THORP Case, *Environmental Judicial Review Bulletin*, 1 (1), pp. 8-10.

24. *Twyford Parish Council v Secretary of State for the Environment and Secretary of State for Transport* (1990), 4 JEL 274 (1992).

III CASE STUDY – UK NIREX LTD. PROPOSED ROCK CHARACTERISATION FACILITY

The Nirex Rock Characterisation Facility

Plans by the Government nuclear waste agency (UK Nirex Ltd.) to construct a rock characterisation facility (RCF) at Longlands Farm in Cumbria were subjected to a public inquiry at Cleator Moor, Cumbria following refusal of planning permission by Cumbria County Council and an appeal by UK Nirex to the Secretary of State for the Environment. The inquiry opened on 5 September 1995 and lasted for five months. The Inspector was supported by an Assistant Inspector and a Scientific Assessor.

The proposed RCF would be located on the edge of the Lake District National Park (see Figure 1) and would involve the excavation of two vertical shafts of 5 m diameter, 50 m apart to a depth of some 600 MBOD, opening out into an extensive series of underground chambers and galleries (see Figure 2). The development would involve the building of extensive surface buildings up to maximum height of some 29 m, fencing and security structures, large amounts (140 000 m^3) of spoil and additional traffic. The site would be highly visible from the National Park and local footpaths in what is currently rural land fringing the National Park. The 'temporary' project (in three stages) is proposed to last for a period of about twelve years during which time Nirex would apply for planning permission for a full repository if the site was confirmed as suitable. On a Nirex best case scenario this could occur after Phase 1 of the project, as little as five years after initiating construction of the RCF. Parts of the RCF excavation might be usable as part of a future deep waste repository. UK Nirex Ltd. claimed that the RCF was needed to investigate the Borrowdale Volcanic Group of rocks for their suitability for a deep waste repository (DWR) and that this site adjacent to Sellafield (where much of the waste would be produced) had not yet been selected as the site for a DWR. The coincidence was, needless to say, not lost on objectors who saw this RCF proposal as the 'thin end of the wedge' and that Nirex had already selected this site as suitable for a DWR. Indeed, Nirex must have had sufficient information about the site to warrant an RCF costing at least £200 million. While an environmental statement had been submitted with the planning application it was limited in its scope simply to the RCF and failed to address alternative sites or processes. Objectors to the proposal, in addition to the relevant local authorities, included Cumbrians Opposed to a Radioactive Environment (CORE), Gosforth Action Group, Greenpeace, Friends of the Earth, National Steering Committee of Nuclear Free Local Authorities, Friends of the Lake District (FLD) and (unusually) another EU Member State – the Irish Government.

To this end Friends of the Lake District, in addition to giving evidence to the inquiry, also made a formal complaint to the European Commission over what were believed to be serious breaches of the EC Directive 85/337/EEC on environmental impact assessment by the UK Secretary of State for the Environment and (as an emanation of the state) UK Nirex Ltd.[25] The complaint was made in August 1995 and asked the European Commission to investigate their concerns and to

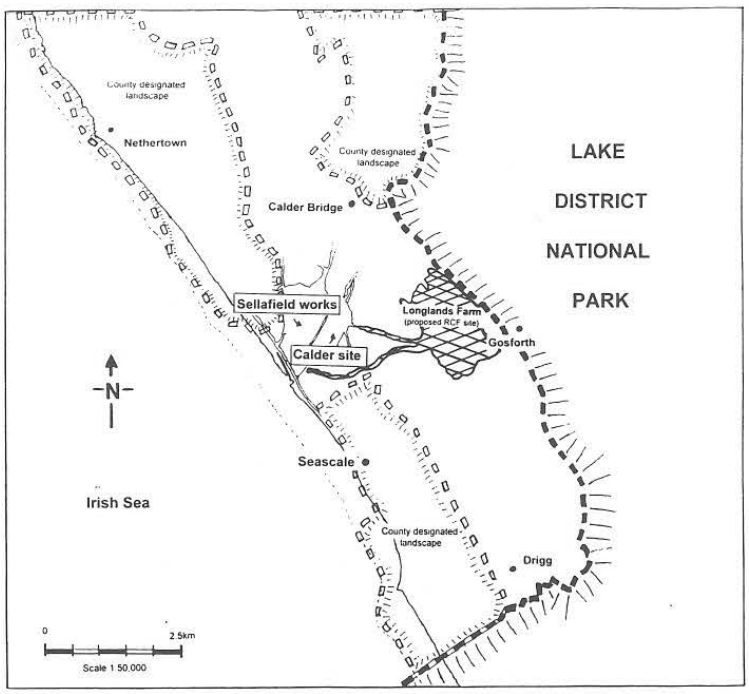

Figure 1. Location of proposed Rock Characterisation Facility

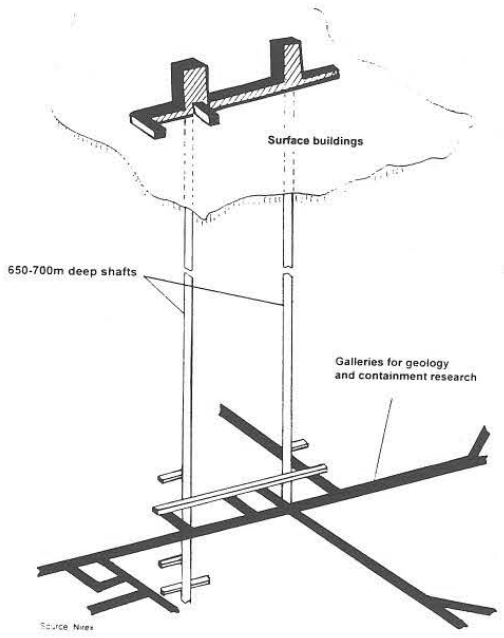

Figure 2. Schematic representation of proposed Rock Characterisation Facility

take appropriate action to ensure the requirements of the Directive are met. A similar complaint was subsequently made by the Irish Government.[26]

The definition of 'project' and its application in this case

The prime objective of the EIA Directive is to identify and assess direct and indirect effects of a proposed project at the earliest possible opportunity in the planning process. With that in mind, we can consider the specific details of this case and the possible interpretation of the way in which the EIA process has or has not met the requirements of the Directive.

What is the 'project'?

In determining the boundaries and extent of the project it is important to address the relation between the RCF and any future repository. There is, arguably, a clear link between the RCF and the likelihood of a subsequent application for planning consent for a full repository, since the RCF represents a substantial commitment of resources over time. Indeed, UK Nirex state in the environmental statement[27] that

> If ... the RCF... enables Nirex to achieve sufficient confidence in the suitability of the site to host a repository for the disposal of radioactive waste, planning permission for a repository will be sought.

This would seem to fall within the scope suggested by the Advocate General of *current plans* (above).

There is, then, a question over the project category of the EC Directive 85/337/EEC under which the environmental statement should have been required. Cumbria County Council, the planning authority, required the ES under Annex II(2)(b): *Deep drillings* (which includes drilling for the storage of nuclear waste material). Nirex accepted that an ES was required on the basis of the deep drilling activity rather than any link with radioactive waste. It is at least arguable whether this is merely an Annex II drilling project or whether it should more properly be regarded as an Annex I project (Annex I (3)): *Installations solely designed for the permanent storage or final disposal of radioactive waste*. The purpose of the RCF is clearly to provide the experimental evidence that this particular location is suitable for permanent disposal of radioactive waste. The distinction between whether it is an Annex I or Annex II project depends upon the closeness of the link between the RCF and any final repository. While the RCF element of the project is primarily concerned with deep drilling operations, the overall project is solely designed for the permanent storage or final disposal of radioactive waste. The fact that the separate elements of the project may be separated by time does not diminish the relationship between the component parts. Even if it is simply an Annex II project, that does not diminish the requirement for the EIA to address alternatives or all direct and indirect effects.

If the project is to be regarded as only the RCF with no relationship to any future repository, it makes it impossible to identify and assess the likely significant direct and indirect effects. The Directive states in Article 3 that an assessment should consider direct and indirect effects while Annex III elaborates on this as including any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the project (subject to the interpretation addressed below). This is not possible if the boundary is effectively drawn around the immediate RCF effects alone, rather than considering the long-term possible impacts – direct and indirect – from a repository. Such an approach runs counter to the principles of EIA which are about preventing adverse impacts and the need to consider them at 'the earliest possible stage in all the technical planning and decision making processes'.[28] As we saw above in the discussion of case law, the issue of significant effects should be relevant to defining the project. The definition of the project boundaries depends upon what is required to enable direct and indirect etc. effects to be assessed – i.e. to meet the objectives of the Directive – rather than on the prevailing consent procedures in the Member State concerned. Indeed, Article 2 (2) explicitly states that

> the environmental impact assessment may be integrated into the existing procedures for consent to projects in Member States, *or, failing this, into other procedures to be established to comply with the aims of the Directive*.
>
> (emphasis added)

The fact that a subsequent planning application would be required for a full disposal repository should not exclude the identification and assessment of the potential impacts from the RCF environmental statement if these are likely to be significant. It is a comparable situation to that of the North Yorkshire Power Lines/Wilton Power Station example addressed above and where the Commission agreed that the power station ES should address significant impacts of power lines. Similarly, action taken by the Commission over the Channel Tunnel Rail Link and Kings Cross Terminal in 1991 also supports this interpretation as does the view of the Advocate General (above).

The definition of project determines what is addressed by the ES. A possible, even likely, consequence of the RCF is the development of a long-term disposal repository. The ES should, therefore, at least according to best practice, address repository options and alternative disposal processes. The RCF represents a key commitment to a particular location and process which should be justified by providing evidence of the environmental reasons for choosing that particular option. The choice of location of the RCF is inextricably linked to a suitable repository site. Indeed, it has no other purpose. The key question is: at what point in the planning process will it be too late to require information on alternatives and direct, indirect, secondary and cumulative effects? The answer, it would seem, is that the point of application for a final repository will be too late since too many irreversible decisions will

25. Friends of the Lake District (1995) Letter of Complaint to the European Commission, 10 August 1995.
26. Irish Government: Department of Transport, Energy and Communications (1996) Letter of Complaint to the European Commission, 5 January 1996.
27. Environmental statement, p. 14, para. 1.75.
28. Preamble 85/337/EEC.

have been made. The time to require that information is at the RCF stage.

The Nirex view – that the project is simply an RCF project – provides a highly restricted interpretation of 'project' and effectively circumvents the objectives of the Directive. The argument employed by Nirex that the RCF is simply a test facility to examine the Borrowdale Volcanic Group of rocks (BVG), and that since the BVG is location-specific there can be no alternative, is highly questionable since the RCF is about confirming the suitability of the site for a Deep Waste Repository (DWR), not just to investigate the BVG.

Inadequate information on alternative sites and/or options

The issue of alternatives is a central principle of EIA best practice world-wide, as has been shown above. The inadequate provision of information on alternatives in this case – in particular the refusal of UK Nirex to release detailed, locationally specific information on alternative sites or address alternative options and processes – militates against an effective assessment of potential environmental impact since it is not possible to understand the environmental basis on which the choice of location or project has been made, or on what basis the specified information on avoiding, reducing or remedying adverse environmental impacts has been provided.

Article 3 of the Directive requires the EIA to identify, describe and assess the direct and indirect effects of a project on the following factors:

- human beings, fauna and flora;
- soil, water, air, climate and the landscape,
- the inter-action between the facts mentioned in the first and second indents;
- material assets and the cultural heritage.

Article 5 (1) requires that 'Member States shall ... ensure that the developer supplies in an appropriate form the information specified in Annex II' subject only to the conditions of Article 5 (1) (a) and (b).

The first of these conditions – (a) – requires the information to be provided so long as the Member State considers that the information is relevant to a given stage of the consent procedures and to the specific characteristics of a particular project or type of project and of the environmental features likely to be affected. Clearly the UK Government does consider that information on alternatives is relevant to the EIA process since guidance by the Department of the Environment[29] states:

> Ideally, EA should start at the stage of site selection and (where relevant) process selection so that the environmental merits of practicable alternatives can be properly considered.

It also includes reference to the provision of information on 'main alternative sites and processes considered, where appropriate, and reasons for final choice' (paragraph 1.4, Appendix 4).

Similarly, the Department of the Environment's own Planning Policy Guidance note, PPG 23, on Planning and Pollution Control states that environmental statements 'may – and as a matter of practice normally should – include an outline discussion of the main alternatives studied by the developer and an indication of the reasons for choosing the development proposed, taking account of environmental effects.' (paragraph 3.16, PPG 23). Department of the Environment guidance on preparing environmental statements[30]includes the following points:

> If the environmental principles contributing to the elimination of variants [alternatives] are carefully recorded at the time of the [site/process selection] decision, this will greatly improve the credibility and overall objectivity of the eventual ES. (para 2.18)

> Where need and demand are shown to have direct links to environmental quality, these may be material considerations in the context of the planning decision. (para. 2.19)

Clearly, UK Nirex must have believed that information on alternatives was relevant to its decision to make an application for the RCF since it had compiled much of that information, but refused, other than by providing the multi-attribute decision analysis (MADA) information, to make it public. In this case, the UK Government either failed to require the provision of such information or exercised unreasonable discretion in deciding that information on alternatives was not relevant to the current consent procedure. Either way, this would be a breach of the EIA Directive, with UK Nirex Ltd. also in breach for not publishing adequate information on alternative sites and options in the environmental statement.

It is not sufficient to argue that such information on alternatives need not be included because it is not relevant to a given consent procedure. Since Article 5 (1) also refers to the relevance of the information '... to the specific characteristics of a particular project or type of project and of the environmental features likely to be affected', this suggests such information is highly relevant, especially given the potential impact of the proposed development on *inter alia* the adjoining Lake District National Park. In addition, as argued above, the interpretation of where the boundaries of a project are drawn depends on the ability of the consent procedures to meet the objectives of the Directive to assess direct and indirect effects and that appropriate consent procedures should be established to meet those objectives if existing procedures do not adequately do so.

Information on alternatives was requested by the planning authority, but information on the location of alternative sites or alternative processes has not been provided by UK Nirex. The information provided in the UK Nirex document: *Disposal of Intermediate and Low-Level Waste: Deep Repository Programme, Comparison and Ranking of Site Options*[31] was

29. UK Department of the Environment (1989) *Environmental Assessment: A Guide to the Procedures*. HMSO, London.

30. UK Department of the Environment (1995) *Preparation of Environmental Statements for Planning Projects that Require Environmental Assessment: a Good Practice Guide* (December 1995). HMSO, London.

inadequate since it did not identify alternative sites other than Dounreay, and it did not address alternative processes/methods of disposal/storage, or the zero option. Such information was also requested by another EU Member State Government, that of the Republic of Ireland who commented on the aforementioned document[32] that:

> The Minister considers that the conclusions of this document are not sufficiently detailed nor satisfactorily reached to justify a decision to concentrate investigations on Sellafield alone.

It is difficult to see any justification for not providing this information. Arguments that it would not be in the public interest run counter to the wider public interest of providing for effective decision-making, which is not possible without adequate information on alternatives. Furthermore, such an interpretation would be exceptional and, it could be argued, would warrant seeking an exemption under Article 2 (3) which had not been sought. The UK Department of Transport, for example, regularly identifies alternative routes (though not other options) for public consultation over trunk road proposals and so a desire to avoid 'planning blight' in this case would seem an inadequate argument, given that such alternatives are addressed in other forms of development, even by Government agencies. If the Nirex case is seen as so different to other forms of development that information on alternatives would be contrary to the public interest, it can only indicate that the RCF is more than an experimental drilling facility and is intimately related to ultimate disposal of radioactive waste (and therefore an Annex .I project?). In which case a full EIA covering repository and disposal options and alternatives and all significant direct and indirect effects should have been provided.

The second condition – (b) – of Article 5 (1) is that a developer may reasonably be required to compile the information in Annex III having regard *inter alia* to current knowledge and methods of assessment. It is clear that in this case this argument cannot be used to support failure to provide information on alternatives since Nirex had already compiled the information. They simply refused to release it. In addition, as we have seen, UK Government guidance supports the principle of normally providing information on alternatives.

Therefore, the Directive's requirements would appear to be quite clear: that if the nature of the project is such that information on alternatives, direct and indirect effects is relevant, and if the receiving environment is such that such information would be crucial to making an informed decision, that information should be provided. Since it has not been, the UK Government and UK Nirex Ltd. would appear to have been in breach of the EIA Directive.

Notwithstanding the arguments above, it is arguable that the specified information in Article 5 (2) (and Schedule 3 (2) of the UK Town and Country Planning (Assessment of Environmental Effects) Regulations 1988 (as amended)) in any case requires such information where it is crucial to the overall EIA. Article 5 (2) requires at least:

- a description of the project comprising information on the site, design and size of the project;
- a description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects;
- the data required to identify and assess the main effects which the project is likely to have on the environment;
- a non-technical summary of the information mentioned in indents 1 to 3.

It is inconceivable that such information can be provided without an adequate consideration of alternative sites and/or processes. First, it is not possible to describe measures envisaged to avoid, reduce or remedy significant adverse effects without addressing alternatives and describing which options/measures are most likely to avoid, reduce or remedy. The choice of an alternative process or location may be the best way to do this. Without adequate information, including locations, it is impossible for others, including the planning authority, to fully evaluate the environmental statement or the EIA process as a whole.

Second, it is also inconceivable that the data required to identify and assess the main effects of the project can be adequately provided without a consideration of the alternatives. The impacts of a chosen location/process can only be identified and assessed effectively against the relative impacts of alternative locations and/or processes/options. The process and site should be chosen as a result of the EIA process, not before its application, i.e. taking into account the likely environmental effects of the various alternatives.[33]

Article 5 (2) then – irrespective of the interpretation of the reference to Annex III in Article 5 (1) (which serves to reinforce the argument) – already requires information on alternatives to be provided where it would be central to identifying and assessing the main effects of a proposed project and the measures envisaged to avoid, reduce or remedy those effects. Nirex's view that there is no alternative to the RCF examining the BVG would seem to ignore the wider objective of the RCF as part of a repository search programme.

Concerns over potential transboundary impacts by another EU Member State (Ireland)

It is particularly relevant in this case that another Member State – the Republic of Ireland – has expressed its concern over the proposal. Article 7 of the EIA Directive 85/337/EEC regarding transboundary effects is relevant in considering whether a request for information on alternatives by another Member State should be met and whether it falls within the requirements of the Directive. It is helpful in addressing this issue to have regard to relevant proposed changes to the EIA Directive and to the requirements of the UNECE Espoo Convention (1991) on environmental impact assessment in a transboundary context[34] (which explicitly specifies the need to address alternatives (e.g. locational or technological, and

31. UK Nirex (1995) *Disposal of Intermediate and Low-Level Waste: Deep Repository Programme, Comparison and Ranking of Site Options*.

32. See outline submission and evidence by Irish Government to the Planning Appeal Inquiry (June 1995 and January 1996).

33. *Supra* note 30.

34. UNECE Convention on Environmental Impact Assessment in a Transboundary Context 25.2.91.

no action) and their effects.

The Espoo Convention on Trans-Boundary Impacts

The United Nations Economic Commission for Europe (UNECE) Convention on environmental impact assessment in a transboundary context was signed by 27 countries and the European Community at Espoo in Finland on 25 February 1991. Apart from applying to many more countries, the Convention elaborates considerably on the trans-boundary provisions of the EC Directive on EIA. Article 7 of the EC Directive requires that where a project is likely to have a significant effect on another Member State that Member State must be consulted and information provided to it in the same way as to the nationals of the Member State within which the project is to be located. The Espoo Convention first of all requires EIA to be carried out prior to a decision to authorise or undertake a proposed activity (listed in Appendix I to the Convention) likely to cause a significant adverse transboundary impact. The convention also sets out general guidance for identifying criteria for determining significant adverse impacts (Appendix III to the Convention). Parties to the convention must provide for an opportunity for the public in the country affected to participate in the relevant EIA procedures which must be equivalent to that provided to the public in the country of origin.

Appendix II of the Espoo Convention (1991) (see Appendix 3) specifies information to be included in the environmental impact assessment documentation in accordance with Article 4 of the Convention and shall, as a minimum, contain:

(a) a description of the proposed activity and purpose;
(b) a description, where appropriate, of reasonable alternatives (for example, locational or technological) to the proposed activity and also the no-action alternative;
(c) a description of the environment likely to be significantly affected by the proposed activity and its alternatives;
(d) a description of the potential environmental impact of the proposed activity and its alternatives and an estimation of their significance; ...

The RCF project could, in this case, be seen as part of a larger repository project and, following that interpretation, falls under Appendix I (3) of the Espoo Convention, being an installation for the storage or disposal of radioactive waste.

The EC Directive 85/337/EEC (Article 7) makes provision for Member States likely to be affected by a project in another Member State to be provided with the information gathered pursuant to Article 5 and for consultation. The Espoo convention goes further than the current requirements of the Directive by specifying in more detail the information required and in establishing procedures to be followed. However, the Directive requires the affected Member State to be provided with the same information as the public in the Member State in which the project is proposed. The arguments detailed above therefore also hold in the case of information which should be provided to another Member State.

The European Commission's proposed amendments to the EIA Directive (COM (93) 575 final,[35] 1994; COM (95) 720 final, 1996)[36] include proposed amendments to implement the Espoo Convention (see Appendix 4) and indeed would go further by extending the principles of the Convention to all projects covered by Annex I and II of the EIA Directive (rather than just the Appendix I projects of the Convention). Although these amendments have not yet been agreed, their draft status provides an indication of the spirit in which the current provisions should be viewed and those of the Espoo Convention to which EU Member States and the Community are signatories, and to the current policy context in which the legislation is operating. The proposed amendments include the provision that the Member States concerned shall enter into consultation, setting a reasonable timetable for:

(i) the main alternative solutions to the project which have been examined;
(ii) the measures which may be taken to avoid, reduce and, if possible, offset the adverse transboundary effects; ...

Since, arguably, Article 5 requires information on alternatives to be provided, such information should be provided to another Member State where so requested under the current Directive and under the Espoo Convention.

IV DISCUSSION: LESSONS TO BE DRAWN FROM THE CASE STUDY

The issue of 'project' definition is an important one, but one which has received little attention from Member States or the European Commission. No attempt was made by the Commission to amend project definition in the proposed amendments (COM (95) 720 final) yet, as we have seen, this issue has come before the courts and been the subject of formal complaints on a number of occasions. Perhaps this is not all that surprising given the potential number of actions to which EIA might be extended by having a more liberal interpretation of what constitutes a project.

There would seem to be a strong case against the UK Government in this case for so far failing to require the provision of adequate information on alternatives, or else for having exercised unreasonable discretion in deciding that information on alternatives was not relevant to the current consent procedure. Either way, this would be in breach of the EIA Directive, with UK Nirex Ltd. also in breach for not themselves publishing adequate information on alternative sites and options in the environmental statement. The failure to ensure the EIA Directive is properly applied – and that projects are adequately defined according to the objectives of the Directive – must rest with the Secretary of State for the Environment. Since both the UK Government and UK Nirex Ltd., in embarking upon the EIA process in this case, appear to have accepted the obligations imposed by the Directive (and there was no attempt to seek an exemption of the project from the requirements of the Directive (Article 2 (3)), there would appear to be no justification for not meeting in full the requirements of the Directive.

35. Proposal for a Council Directive amending Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, COM (93) 575 final, 16.3.94.
36. *Supra* note 4.

These views would appear consistent with that of the Advocate General in *Bund Naturschutz and others* (1994) in that the fact that a subsequent project or component of a project may be subject to a separate application for consent does not prevent its impact from being relevant to the EIA of the earlier or initial project. Should the RCF be given consent, its very existence will have implications for the future repository programme which should have been addressed at the earliest opportunity, i.e. before consent for an RCF had been given. If a decision is taken which locks future decisions into a particular path, it is crucial that the full environmental implications are addressed at that decision point, and not left until it is too late to reverse irreversible decisions (as was the case with Wilton Power Station). This is particularly true given the absence of any formal requirements for strategic environmental assessment, e.g. for radioactive waste disposal plans or for the overall Nirex repository programme.

Even if legal definition of the Directive is limited, this doesn't mean developers have to interpret it so narrowly. They will still, otherwise, run into the same criticism from the public and NGOs, as indeed did Nirex in this case. It is not just good practice to consult the public early and consider alternatives, nor is it just economic good sense, it also makes practical sense if confrontation between participants is avoided. Unfortunately, because of the secretive nature with which Nirex pursued this application, the overwhelming majority of participants at the public inquiry were objectors with only a handful supporting the application, largely on the grounds of (limited) employment prospects. Nirex's desire to avoid making any connection between the RCF and a DWR merely made the link all the more obvious, more frustrating for the public and more conflict-ridden than if they had tackled the repository issue head on.

The direct impact of the RCF itself cannot, therefore, be adequately assessed without considering alternative repository sites, since an RCF at an alternative potential repository site may have more or less environmental impact. The limited interpretation of project definition used by Nirex would seem to circumvent the objectives of the EIA Directive. However, without amendment of the project definition in the Directive, or definitive court judgements, there is little to discourage developers from taking such a restrictive view in future. This in turn runs counter to the current developments in EIA best practice to involve and consult the public as early as possible, including about alternatives. Needless to say, the Inspectors' report is eagerly awaited, probably late in October 1996.

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Appendix 7

SHEATE, W.R (1996b), EIA in the United Kingdom, (Chapter 5) in SHEATE, W. R. (1996) *Environmental Impact Assessment: Law and Policy – Making an Impact II* (2nd edition), London, Cameron May, 300pp. ISBN 1 874698 910

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Making an Impact II

by
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Chapter 5

EIA IN THE UNITED KINGDOM

Introduction

The EIA Directive (85/337/EEC) has been implemented in the UK through secondary legislation under section 2 (2) of the European Communities Act 1972. This has been in the form of a series of regulations implementing the Directive in a number of policy sectors where different consent procedures operate, or where there are none. The requirements of the various regulations and procedures are summarised in a booklet published by the Department of the Environment (UK DoE, 1989).

The majority of projects requiring mandatory EIA (Annex I projects) and discretionary EIA (Annex II projects) fall under the town and country planning system and generally require planning permission from local authorities. The exceptions are the major transport infrastructure projects which either require the consent of the Secretary of State for Transport or are promulgated as public, private or hybrid Bills and therefore require, parliamentary approval; or projects requiring the consent of the relevant Secretary of State (which often includes deemed planning consent), such as energy projects, or projects of major significance and which are 'called-in' for determination by central Government. Although the Directive is somewhat ambiguous as to whether it applies to projects subject to parliamentary approval, the UK Government has chosen to require EIA in such cases through amendments to Parliamentary Standing Orders (CPRE, 1991a).

While implementation under section 2(2) of the European Communities Act 1972 allows compliance with EC legislation and therefore with Directive 85/337/EEC, it provides no scope for further development of EIA within the UK beyond a strict interpretation of the requirements of the EC legislation. Regulations under s.2(2) of the EC Act allow implementation only of the strict letter of the parent Directive.

To extend the scope of EIA, the benefits of which the Directive clearly signals in Article 13, primary legislation was required. In April 1991 the Government finally accepted the need for primary legislation for EIA (CPRE, 1991b) and included it in the Planning and Compensation Act 1991. Section 15 of the Act now allows the Secretary of State to make regulations for the purposes of requiring EIA for projects other than those already listed in Annex I or II of the EIA Directive. The lack of this provision had meant that certain projects slipped through the EIA net, for example drinking-water treatment plants and trout farms; and the requirement for some others was at best ambiguous, for example wind farms and golf courses. New regulations under these provisions were finally published in 1994 (see below).

While strict criteria or thresholds are included in the Directive for Annex I projects, those created by the UK for Annex II are purely for guidance and have no legal force. The use of criteria and thresholds in the determination of which projects shall be subject to EIA is a difficult issue and one which needs to be treated with considerable care. Superficially, thresholds may appear attractive offering, as the UK Government has argued, a degree of certainty to developers and authorities alike. However, thresholds should only be used where it can be guaranteed that projects falling under the threshold will not a have a significant effect on the environment. Even though thresholds used in Government guidance are indicative, they are more often interpreted as being fixed (see Chapter 3).

The UK implementing regulations comprise:-

> Town and Country Planning (Assessment of Environmental Effects) Regulations 1988 (SI No. 1199)
>
> Town and Country Planning (Assessment of Environmental Effects) (Amendment) Regulations 1990 (SI No. 367), 1992 (SI No. 1494) and 1994 (SI No. 677)
>
> Town and Country Planning (Simplified Planning Zones) Regulations 1992 (SI No. 2414) (Regulation 22)
>
> Environmental Assessment (Scotland) Regulations 1988 (SI No. 1221)

Environmental Assessment (Salmon Farming in Marine Waters) Regulations 1988 (SI No.1218)

Environmental Assessment (Afforestation) Regulations 1988 (SI No. 1207)

Land Drainage Improvement Works (Assessment of Environmental Effects) Regulations 1988 (SI No. 1217)

Land Drainage Improvement Works (Assessment of Environmental Effects) (Amendment) Regulations 1995 (SI No. 2195)

Highways (Assessment of Environmental Effects) Regulations 1988 (SI No. 1241)

Highways (Assessment of Environmental Effects) (Amendment) Regulations 1994 (SI No. 1002)

Transport and Works (Application and Objections Procedure) Rules 1992 (SI No. 2902)

Transport and Works (Assessment of Environmental Effects) Regulations 1995 (SI No. 1541) (amends SI 1992/ No. 2902)

Harbour Works (Assessment of Environmental Effects) Regulations 1988 (SI No. 1336)

Harbour Works (Assessment of Environmental Effects) (No. 2) Regulations 1989 (SI No. 424)

Harbour Works (Assessment of Environmental Effects) Regulations 1992 (SI No. 1421)

Electricity and Pipe-line Works (Assessment of Environmental Effects) Regulations 1990 (SI No. 442)
Electricity and Pipe-line Works (Assessment of Environmental Effects) (Amendment) Regulations 1996 (SI No. 422)

Town and Country Planning General Development

Order 1988 (SI No. 1813) (Article 14[2]) as amended; Town and Country Planning General Development (Amendment) Order 1994 (SI No.678). The 1988 Order has been replaced by the Town and Country Planning (General Permitted Development) Order 1995 (SI No. 418) and the Town and Country Planning (General Development Procedure) Order 1995 (SI No. 419).

Town and Country Planning (Environmental Assessment and Permitted Development) Regulations 1995 (SI No. 417)

Town and Country Planning (Environmental Assessment and Unauthorised Development) Regulations 1995 (SI No. 2258)

Town and Country Planning (General Development) (Scotland) Amendment Order 1988 (SI No. 977)

Town and Country Planning (General Development) (Scotland) Amendment No. 2 Order 1988 (SI No. 1249). Revoked by Town and Country Planning (General Development Procedure) (Scotland) Order 1992 (SI No. 224) (Article 16)

Similar regulations exist for Northern Ireland (and Gibraltar), although many were implemented some time after the required date of 3 July 1988.

The most important of these regulations are considered in some detail below.

Town and Country Planning (Assessment of Environmental Effects) Regulations 1988 (as amended)

The general tenor of the UK Government's approach to EIA has been, from the outset, grudging and minimalist. During the many years of the development of the Directive the UK Government opposed its introduction, mainly on the grounds that the long-established system of development control under town and country planning legislation was a more effective and sensitive method of assessing the environmental impacts of projects

(see Chapter 2). However, many projects, including many transport, agriculture and forestry projects are not covered by such legislation. Indeed, the UK Government was instrumental in placing agricultural projects firmly in Annex II of the Directive rather than in Annex I (mandatory assessment) as favoured by some Member States (Sheate and Macrory, 1989). The UK Government had assumed, when it came to implementation, that the Annex II projects were, under Article 4(2), wholly discretionary and therefore did not require any further procedures for implementation. The UK Government eventually accepted the view of the European Commission, as required under Article 11(2) of the Directive, that criteria and/or thresholds adopted for the selection of Annex II projects should be notified to the Commission, thereby requiring suitable procedures for implementation. Even so, there are a number of areas which have still not been adequately addressed.

There is, therefore, a clear history of UK Government opposition to EIA in the first instance; both in principle and in relation to proposals that might require the establishment of a consent procedure where one did not already exist, eg agriculture (see below). The general approach has remained minimalist, in which EIA is too often seen as a regrettable burden on the developer which should be reduced by all means possible. This was graphically illustrated in the UK Government's pronouncement on EIA in its White Paper on the Environment published in September 1990. In this the Government said:-

> "But EIAs impose costs both on developers who are required to assemble the information and on the authorities which must evaluate it. Any case for the extension of the application of EIA must therefore be considered carefully."

The UK Government chose to incorporate the requirements of the EIA Directive, as far as possible, into the existing town and country planning system. The Government did not consider it necessary to make provision for EIA in primary legislation, but instead chose implementation by regulations - secondary legislation - under section 2(2) of the European Communities Act 1972. Where different consent procedures exist for projects falling outside the town and country planning system, eg transport or

forestry, separate regulations have been drawn up. Since this mode of implementation limits the application of the Directive strictly to the content of the Directive only, EIA could be applied only to those projects specified in the lists of Annex I and II of the Directive. Until the Planning and Compensation Act 1991 there was no scope in the UK for the wider application or refinement of the principles of the Directive.

On 18 March 1994 the UK Government finally announced that the long-awaited regulations to extend the application of EIA to projects not covered by the EC Directive would come into force on 8 April 1994. They were promulgated under section 15 of the Planning and Compensation Act 1991 (section 71A of the amended Town and Country Planning Act 1990). However, in an extraordinary volte face, which appears to have reflected the deregulation initiative within central government rather than any commitment to sustainability, the regulations applied only to wind turbines, coastal protection works, motorway service areas and toll (private) roads. The Government chose not to apply the regulations (as originally proposed) to trout farms, golf courses, non-motorway service areas or drinking-water treatment plants - many of the developments which had persuaded the Government to act in the first place. It is likely that at least some of these projects will now be covered by amendments to the EC Directive.

While it can be argued that the Directive can have direct effect (the so-called doctrine of direct effect, see Chapter 9), in practice it is the implementing legislation in the Member State (in the UK, the Regulations under the European Communities Act 1972) which are the guidelines for local authorities and developers. It is therefore imperative that the implementing legislation fully implements the 'parent' Directive. If not, we see the conflicts which have been apparent in the UK.

In formulating the UK regulations, the Government has chosen to employ the term 'Environmental Statement' (ES) which is not found in the EC legislation. During the lengthy drafting of the Directive there was a very real desire to avoid the problems of the US approach to EIA, by making it clear that EIA was a part of the development consent procedure and that the production of an ES was not the sole or absolute requirement. It was

felt that it was the US dependency on the ES which had resulted in the weight of litigation which the EC was at pains to avoid; litigation particularly over the scope and content of the environmental statements. Developers and Member States were keen to prevent the establishment of further sources of delay in obtaining project consent (see Chapter 2).

Given that this debate had occurred, it is perhaps surprising that the UK Government (and many other Member States) explicitly chose to go down this road. Indeed, it has been the poor quality of many environmental statements (acknowledged by the UK Government) which has become the focus of so much concern about EIA in the UK - precisely the issue which all were keen to avoid during the drafting of the Directive. This over emphasis on the ES has, arguably, diverted attention from EIA as a process.

It can be argued that the UK Regulations which implement the Directive downgrade the requirements of Annex III of the Directive, in respect of information to be provided by a developer as part of an EIA. Article 5(1) of the Directive provides the necessary discretion as far as Annex III is concerned. It can be argued that the UK Regulations provide the developer with the discretion and not the competent authority. In so doing, it would appear that the UK has exercised its own (Member State) discretion under article 5(1) by giving the developer the discretion to decide whether much of the information referred to in Annex III of the Directive be submitted to the competent authority.

The UK Regulations, where they refer to the information required by the EIA, relegate much of the Annex III requirements to little more than optional extras. Annex III lists the information required while Schedule 3 of the Town and Country Planning Regulations 1988 employs the word 'may' when referring to the provision of certain information other than that 'specified'.

Under Schedule 3 of the Town and Country Planning Regulations the 'specified' information is:

a) description of development proposed;
b) data necessary to identify and assess main effects on

the environment;

c) description of likely significant effects, direct and indirect, on the environment;
d) mitigation measures;
e) a non-technical summary of the above.

Other aspects of Annex III such as forecasting methods used, alternatives studied, secondary and cumulative effects remain discretionary on the developer rather than the Member State and are frequently left out by developers who are able to justify such omissions by referring to the regulations and Government guidelines.

While the Directive refers to consideration of alternatives "where appropriate" under Annex III arguably there may still be a requirement if it can be said to be appropriate. Under the UK regulations the developer has total discretion, whether or not it is appropriate, to provide such information or not. Indeed, on this specific point, the regulations refer to information on:

> "(in outline) the main alternatives (if any) studied by the applicant..." (Schedule 3[3][d]).

This implies that the developer need only consider alternatives to the proposed project if the developer thinks it is appropriate and then only in outline. Ideally, an assessment of alternatives should be provided as part of the 'specified' information unless that is deemed inappropriate by the competent authority. The proposed amendments to the EC Directive (see Chapter 4) would at least place the alternatives requirement in the specified information although, since the wording remains the same, the discretion will still rest with the developer as to what alternatives if any are studied.

The fact that the developer does not have to justify the forecasting and assessment methods employed under UK regulations is of considerable concern. Claims may be made in an environmental statement which cannot be substantiated yet there is no requirement for such methods to be specified. While competent authorities can require further information from a developer, the onus should be on the developer to provide the necessary information in the first place and not require prompting by the competent authority.

The use of natural resources, the emission of pollutants, the consideration of alternatives, the likely direct, indirect, secondary, cumulative, short-medium and long-term, permanent, temporary, positive and negative effects should be addressed as a matter of course unless it is inappropriate to do so. Best practice suggests that it is rarely inappropriate to consider alternatives. It would not seem unreasonable that the onus should be on the developer to address all the 'optional' implications of Schedule 3(3) unless there is a clear reason why not, rather than an assumption that those aspects will not be addressed unless the developer considers it is relevant or is subsequently required to provide additional information. The former approach is more likely to secure consistency across authorities since an authority would need actively to delete requirements where not appropriate rather than require additional information after the submission of the ES. It would also encourage developers to consult local authorities on whether an EIA is necessary (see Chapter 6) and on its scope.

An appropriate form of words for the beginning of Schedule 3(3) might be:-

> "3. An environmental statement should, unless indicated otherwise by the competent authority, include information on the following matters:-...."

Inclusion of certain information in the ES will depend on whether it is deemed appropriate by the competent authority and ultimately by the courts in the same way as 'significance' of effects.

Infrastructure and Other Projects

Under Schedule 2(10) and (11) of the Town and Country Planning EIA Regulations a range of infrastructure and other projects can be subject to EIA where the relevant authority considers it necessary. These categories include local authority consent powers for local highways and airports.

Circular 15/88 which accompanies the Regulations suggests, for 'other' infrastructure projects, that projects requiring sites in excess of 100 ha may require EA. This guidance threshold seems to be set at a remarkably high level. Many of the projects listed

in Schedule 2(10) and (11) could have significant effects on the environment whilst occupying a considerably smaller area than 100 ha. Interestingly, the UK Government would appear to have accepted the proposed amendments to the EC Directive which include, for example, putting 'Quarries' into Annex I (ie mandatory EIA) where over 25 ha surface area. The UK's indicative threshold for requiring EIA for quarries is currently 50 ha.

Agriculture

Agriculture was a central issue of controversy during the development of the EIA Directive. It was one area for which there was considerable pressure during the drafting process to require mandatory EIAs and therefore for agriculture to be included in Annex I. In part due to UK Government pressure, agriculture was finally placed in Annex II. As already described, the UK was initially under the impression that it would not have to implement EIA for Annex II projects, but once forced to has found agriculture a particularly troublesome area. In the UK, agriculture is now the least-well-implemented of all the policy sectors covered by the EIA Directive.

The UK Government's approach to the agricultural projects included under Annex II (1) of the Directive has largely been 'do-nothing' (see Sheate and Macrory, 1989). While salmon farming in marine waters, land drainage and forestry are covered by separate regulations (see below) there are no existing consent procedures or EIA requirements for the remaining agricultural categories: the cultivation of semi natural or uncultivated land, land reclamation from the sea and the re structuring of rural land holdings. The latter two classes of project are not generally seen to be relevant to the UK - the re structuring of rural land holdings being of particular importance to France (*remembrement*). While there is little land reclamation from the sea at present in the UK, provision for applying EIA to such projects should be made in case they assume greater importance in future as a result of climatic change and rising sea levels. The cultivation for intensive agriculture of uncultivated or semi natural land is, however, a problem in the UK, particularly with respect to moorlands, heathlands, hay meadows and wetlands. This form of cultivation is considered to be an agricultural operation and therefore permitted development, even though the development may constitute a major land use and landscape change.

In the absence of any notification or consent procedure, the UK Government has found it impossible to implement the Directive for such activities.

Elsewhere, the relationship of agricultural development to the planning system has governed the EIA provisions. Many forms of agricultural development involving construction, such as some buildings and farm roads, or excavation such as ponds for fish farming, are excluded from direct consent procedures under the planning system by the General Development Order, 1988 (now 1995). This has caused its own problems for implementation (see below).

The Government has therefore taken a laissez-faire approach and done the minimum required to catch the largest and most obviously damaging projects. The rest are not determined according to environmental impact but according to the availability of existing procedures. Arguments that changes in EC policy elsewhere, eg the Common Agricultural Policy (CAP), will render EIA for these projects unnecessary, ie that there will no longer be pressure for cultivating marginal land, and that policies such as set-aside result in marginal land being taken out of production, do not hold water. Changes in general policy do not necessarily prevent serious environmental damage from individual projects where other incentives or pressures may be operating. In any case, changes in such policy areas may occur and appropriate EIA procedures should already be in place.

Following action by the European Commission, the UK is still (as of mid-1996) in the process of revising implementation of EIA for agriculture and forestry, including how to establish more appropriate consent procedures. Much-delayed regulations (or at least draft proposals) covering these areas are expected to be published in 1996.

The General Development Order 1995

In March 1993, following action by the European Commission over inadequate implementation of the EC Directive, the UK Government published a consultation paper on its proposals to remove permitted development rights (granted under the General Development Order [GDO]1988) for those categories of devel-

opment which, if they were not permitted development, would (a) require EIA under the Town and Country Planning EIA Regulations and (b) be likely to have a significant effect in a Special Protection Area (SPA) under the Birds Directive (79/409/EEC) or a Special Area of Conservation (SAC) under the Habitats Directive (92/43/EEC). The Government finally published a new GDO and Regulations governing EIA and permitted development in 1995 (SI Nos. 417, 418 and 419). However, the background and consultation process leading up to these regulations is instructive.

The Government's proposals took a minimalist approach which depended, as might be expected, rather too much on indicative thresholds as a guide to the need for an EIA instead of applying broad criteria. Neither were there any proposals to withdraw permitted development rights altogether for some projects in Parts 13-17 of Schedule 2 of the GDO despite the recognition that they might have significant effects on the environment. There was no requirement in the proposals to publicise an application for a lawful development certificate - the method favoured by the Government for removing permitted development rights - and place it on the public register.

The Government argued, sensibly, that withdrawing permitted development rights (PDRs) wholesale for particular types of permitted development where it might appear to conflict with one of the Directives might risk missing some projects which might potentially breach one or other of the Directives. That would create an unfortunate loophole if that was the only approach taken. However, there is no good argument why some categories of projects should not be withdrawn wholesale from the GDO and that the system suggested by the Government should not be implemented for any other projects likely to have significant effects. In particular, many projects falling within Parts 13-17 of Schedule 2 of the GDO should be prime candidates for removing PDRs entirely, eg waste-water treatment plants, local authority roads, construction of harbours or marinas. The very fact that they were identified by the consultation paper indicates the possibility of such projects having such significant effects that they require an EIA. This suggests that a larger number of projects should at least be under direct planning control with the opportunity for public scrutiny of planning applications.

The lawful development certification procedure under section 10 of the Planning and Compensation Act 1991 appeared to be an appropriate mechanism for determining whether what would otherwise be permitted development requires a planning application and an environmental impact assessment. This would have involved a developer applying to a local planning authority for a lawful development certificate, to establish whether a proposed development requires planning permission. Where a certificate was refused, ie a planning application was required, there would be a right of appeal to the Secretary of State. The consultation paper was, however, unclear what requirements there would be for publicity or inclusion on public registers.

By adopting both approaches - withdrawal of some PDRs wholesale and the application of the significance test to others, using the lawful development certification procedure those projects most likely to be damaging to the environment could have been required to apply for planning permission as a matter of course and could be subject to EIA in the normal way, whereas those which are less likely to but may still have significant effects could still be subject to EIA where circumstances required it. This approach would have left the discretion as to when to require EIA with the local authority, subject to the test of significance.

The 1995 Regulations came into force on 3 June 1995. Rather than using the lawful development certification procedure originally proposed in the consultation paper, the Government has created a procedure which depends to a great extent on the willingness of the developer to seek an opinion from the local authority as to whether what would otherwise be permitted development falls within Schedule 1 or 2 of the EIA Regulations and therefore requires planning permission and EIA. There is an appeal procedure to the Secretary of State for the developer, should there be disagreement with the local authority over the need for EIA and planning permission. Where the local authority is the developer, the Regulations allow the authority to request an opinion from the Secretary of State as to whether the proposed development falls within Schedule 1 or 2. If so, planning permission must be sought in accordance with the Town and Country Planning General Regulations 1992, accompanied by an environmental statement.

These regulations clearly do not go as far as the Government had originally proposed since it is left to the developer to seek an opinion from the local authority where EIA might be relevant, rather than a requirement to obtain certification that the proposed development would be permitted development and not require EIA. It is clearly less bureaucratic than the scheme originally proposed, but in many ways turns the original proposal on its head. Instead of developers with PDRs being required to have those rights confirmed where proposed development would otherwise have come under Schedule 1 or 2, developers can now assume their PDRs apply unless they have reason to think Schedule 1 or 2 applies, in which case they may (may, not 'must') seek an opinion from the local authority. The Government's view is that very few additional projects will be caught by these new regulations; guidance is provided by Circular 3/95 (UK DoE, 1995a) to help local authorities decide whether a project is likely to have significant environmental effects, bearing in mind the purposes of permitted development rights. Indicative thresholds and criteria are included in the guidance, including the advice that projects affecting SSSIs are often likely to require EIA, and EIA would normally be required for projects affecting a Ramsar site, a potential or classified SPA or a candidate, agreed or designated SAC.

Chapter 6 addresses the problem where developers fail to ask local authorities for a direction on whether EIA is required and go ahead and carry out an EIA without anyone knowing they are doing so. In these circumstances, there is little opportunity to have an input to the EIA process before the application is made. If they ask for a direction, the outcome must be placed on the public register. A similar situation may occur under the permitted development system. There appears to be no disincentive for a developer not to seek a determination as to whether a planning application and EIA is required. Since any opinion of the local authority under regulation 3 about the need for EIA must be placed on the public register, a developer may choose to either assume PDRs apply or that they don't and an EIA will be required and get on and produce it.

The approach to withdrawing PDRs as laid out in the consultation paper was, however, a welcome recognition that the test of significance should be the ultimate test in requiring EIA.

This is reinforced by Circular 3/95 which stresses the indicative nature of the thresholds and criteria, and that judgment would have to be made on a case-by-case basis.

The main projects likely to be affected by the new regulations include: field drainage works, reclamation of land from the sea, surface storage of fossil fuels and natural gas, storage of petroleum, petro chemical and chemical products, local authority roads, construction of harbours or marinas, long-distance aqueducts, waste-water treatment plants (works) and sites for depositing sludge (sewage-sludge lagoons).

The thresholds originally suggested in the consultation paper appeared to be entirely arbitrary, eg 15 km or more for a long-distance aqueduct. This threshold has been omitted from Circular 3/95, leaving only a reference to the length of the aqueduct or pipe line influencing the scale of environmental effects. Further, the distance of 10 km for local authority road permitted development is decidedly high, as it is as an indicative threshold for roads generally. This threshold remains in the new Circular. On a more general and welcome point, Circular 3/95 stresses the importance of the test of significance in deciding which projects should be subject to EIA, going beyond the rather narrower interpretation of the consultation paper. Although it continues to suggest that sensitive locations are most likely to be designated areas, the circular recognises that local, non-statutory designations may be relevant in the screening process.

Simplified Planning Zones (SPZs) and Enterprise Zones (EZs)

Department of the Environment Circular 24/88 provides advice on the application of EIA in Simplified Planning Zones [SPZs] and Enterprise Zones [EZs]. For Schedule 1 projects the situation is unambiguous. Such projects must be excluded from all SPZ permissions. Two alternative approaches are possible with respect to Schedule 2 projects.

Where an SPZ scheme prescribes the particular type of development permitted, it will be possible for authorities to define the permission in such a way that it excludes any project requiring EIA. In other cases, the schemes could have the effect of grant-

ing permission for Schedule 2-type developments but a developer would not be free to undertake that development without first consulting the local planning authority so that the need for EIA can be considered. Circular 24/88 suggests that, given the scope and purpose of SPZs and the nature of the areas where they are designated, there would be very few cases in which EIA would be required.

The Town and Country Planning (Simplified Planning Zones) Regulations 1992 (SI No. 2414) (Regulation 22) now requires that where a local authority proposes any new SPZ scheme, it shall not include any development which would otherwise fall within Schedule 1 or 2 of the EIA Regulations.

Circular 24/88 makes clear that should new EZs be designated they would have to make provisions for EIA of projects within the scope of Annexes I and II of the EIA Directive. At the time of publication of the Circular, all designated EZs in England and Wales had occurred before the Directive had come into force and so no changes were necessary to existing EZs.

Highways Regulations

Under the EC Directive, EIA is always required for certain projects (Annex I) such as motorways and may be required where a project is likely to have significant effects for a long list of other project categories (Annex II) such as local roads. The relevant regulations which relate to highways are:-

> Highways (Assessment of Environmental Effects) Regulations 1988 (SI No. 1241)
>
> Highways (Assessment of Environmental Effects) Regulations 1994 (SI No. 1002)
>
> Town and Country Planning (Assessment of Environmental Effects) Regulations 1988 (SI No. 1199), as amended
>
> Town and Country Planning (General Permitted Development) Order 1995 (SI No. 418)

The Highways Regulations are the key regulations for trunk

roads and motorways, since they amend the 1980 Highways Act under which such roads are given consent. The irony of this situation should not be forgotten when dealing with EIA for trunk roads and motorway proposals: such schemes are proposed by the Department of Transport which also gives consent to proceed with building the scheme, and, until 1994, also carried out the EIA. Since 1994, the implementation of the Department's national Roads Programme has been carried out by the Highways Agency which, although at arm's length from the Department, is charged with implementing Government policy. The creation of the Highways Agency did at least separate the people who propose and consent a road from those who do the EIA. However, at no stage can there be said to be rigorous independent scrutiny. A similar situation may exist with local highway schemes proposed by local authorities, although in some cases the proponent will be the Local Highways Department and the consenting 'authority' the Planning Department of the same authority or the Secretaries of State for the Environment and Transport.

The New Roads & Streetworks Act 1991 now requires mandatory EIA for all private road schemes, e.g., toll motorways. This was implemented by the 1994 EIA Regulations drawn up under s.15 of the Planning and Compensation Act 1991 (s.71A of the 1990 Town and Country Planning Act). This places private-sector road schemes into Schedule 1 of the EIA regulations. Private road proposals, alone in this field, must be submitted for consent to an authority which is not also the promoter, ie either to the Secretary of State for Transport or the local highway authority for 'toll orders' to be made or confirmed.

Trunk roads and motorways

The types of road schemes that require EIA under the provisions of the Directive and the Highways Regulations were, until July 1993, outlined in guidance given by the Department of Transport in the Departmental Standard HD 18/88, along with guidelines on the composition of Environmental Statements to be published with draft Orders. This guidance is still relevant to those schemes already under way. The new guidance (see below) applies to new entries to the Roads Programme. The earlier guidance lists the following road construction projects as requiring EIA:-

- all new motorways and roads reserved for automobile traffic accessible from interchanges or controlled junctions and on which, in particular, stopping and parking are prohibited;

- all new trunk roads over 10km in length
- other new trunk roads over 1km in length which pass

a) through or within 100m of

i) a National Park
ii) an SSSI notified under s.28 of the Wildlife and Countryside Act 1981 or subject to an Order under s.2
iii) a conservation area within the meaning of the Planning (Listed Buildings and Conservation Areas) Act 1990
iv) a nature reserve within the meaning of the National Parks and Access to the Countryside Act 1949

b) through an urban area where 1,500 or more dwellings lie within 100m of the centre line of the proposed road;

- motorway and other trunk-road improvements which are likely to have a significant effect on the environment.

The last category above means that any motorway or trunk-road improvement scheme (including motorway widening) can be subject to EIA if it can be shown that it is likely to have a significant effect on the environment. Ultimately, of course, the test of significance is one to be ruled on by the courts or the European Court via a complaint to the European Commission.

Prior to 1994, the EIA for a trunk-road scheme was carried out by the Department of Transport and by the same people who had originally promoted the scheme through the Roads Programme and who would grant consent for the scheme, eg after a public inquiry. Since 1994, the task of implementing the Roads Programme and therefore carrying out EIA has been passed to the new Highways Agency. This has also coincided with considerable controversy over road building and transport issues generally, along with a sizeable cut in the budget available for road building. Although the Highways Agency means a degree of separation of responsibilities

of developer and consent authority, it is nowhere near as complete a separation as occurs under normal planning procedures. During the past few years, the Government (through the Highways Agency) has also introduced the concept of 'round-table conferences', open to the public, prior to making a decision on a preferred route option. Such conferences are supposed to encourage debate about all options for dealing with a particular transport problem, although since they are run by the Highways Agency it is unlikely that a non-road option would prevail. In many ways the current round-tables are still happening too late in the process. They really need to take place prior to a scheme entering the Roads Programme, because once in the programme the decision has already been made that a road-based option is the best solution, without for example, public transport options having been considered.

There has been some unfortunate confusion with terminology in the field of EIA and road schemes. The DoT traditionally referred to its form of EIA as 'Environmental Appraisal' and the main guidance to carrying out such appraisal was until July 1993 the DoT's Manual of Environmental Appraisal. One of the general criticisms of the DoT's Environmental Appraisal process is that it is not iterative in the way EIA should be, ie appraisal tends to occur at the end of the design process rather than in parallel to it, the latter enabling changes to be made in response to problems identified along the way.

The DoT's Manual of Environmental Appraisal (MEA) and the Departmental Standard HD 18/88 set out the formal appraisal procedure which attempted to reconcile technical requirements with economic considerations and environmental effects. The MEA was introduced in 1983 and went through a revision process in the early-1990s. The revised manual was published as Volume 11 of the DoT's Design Manual for Roads and Bridges (Environmental Assessment) and brings a number of significant improvements to the language used by the DoT, including the need for EIA to be iterative (DoT, 1993). The term 'environmental appraisal' has finally been replaced by 'environmental assessment'. The Highways Regulations, however, remain largely the same.

The central component of the old MEA was the use of a tabulated summary - the 'framework' - that considered the effects of the proposed road scheme on six different receptor groups.

These groups were:-

travellers;
occupiers of property;
users of facilities;
policies for conserving and enhancing the area;
policies for development and transport; and
financial effects.

The limitations of this approach are evident since the consideration of environmental effects was limited to the effect of the proposed scheme on 'policies' for conservation and enhancement and tended to exclude wider environmental issues. The framework was also heavily biased towards user groups, ie people who are more likely to benefit from a road scheme even if only marginally, for instance in terms of time savings on journeys, rather than wider environmental parameters. The new Manual retains a similar framework (referred to as Environmental Impact Tables or EITs) which now cover the following categories:-

A: Appraisal groups
1.Local people and their Communities;
2.Travellers;
3.The Cultural and Natural Environment;
4.Policies and Plans; and
B: Land Use Table
C: Mitigation Table

Cost-Benefit Analysis (COBA) and financial effects have been removed from the new EITs. A cynic might suggest that this is a deliberate attempt to camouflage the importance that COBA has on decision-making. The fact that COBA is now dealt with separately in formal terms does not make it any less important.

An 'environmental appraisal/assessment' is carried out for all road schemes promoted by DoT. However, the documentation is only published as an Environmental Statement (ES) when the criteria laid down in the Departmental Standard HD18/88 are satisfied. An ES must also include a non-technical summary published either as part of the ES or, preferably, separately.

Even where an ES is not published the details of the appraisal should be available at a public inquiry.

Elsewhere in the Manual there is guidance on techniques for assessing environmental impact, including noise, visual impact, air pollution, severance, ecological impact, etc. Curiously, little of this information has tended in the past to find its way into environmental statements. Instead, it was the framework which most often formed the core of a DoT ES. It is to be hoped that the new Manual will result in rather more informative ESs.

The DoT's own Standing Advisory Committee on Trunk Road Assessment (SACTRA) reported in 1992 (DoT, 1992) on the assessment methods used by the DoT and concluded that they were in need of considerable overhaul, including the need for earlier and wider assessment and consultation. The introduction of round-table conferences (see above) was partly in response to gathering pressure over the iniquities of the trunk-road consent procedures (Sheate and Sullivan, 1993). Nevertheless, it is still the case that an Environmental Statement is produced to accompany the draft Orders for the preferred route option, occurring only after the Public Consultation stage on the preferred option by which time many crucial decisions will already have been taken, not least that a road is needed at all. While the assessment process may address alternative routes (though not other different solutions) using the framework/EIT methodology, only the preferred option is usually addressed in the ES.

This lack of formal opportunity to consider real alternatives - a central facet of best-practice EIA - other than different routes illustrates the differences between the DoT's environmental appraisal/assessment process and EIA. The emphasis of DoT's environmental appraisal/assessment is still on mitigating damaging effects of the preferred option (usually preferred because of time savings and cost under the framework methodology and COBA) rather than modifying the proposal or options to eliminate or minimise the likely damaging effects on the environment. Not surprisingly, therefore, the DoT lays great emphasis on the numbers of trees it plants as part of its road-building schemes, even though these can in no way be considered a quid pro quo for the loss, for instance, of ancient woodland or heathland.

The new Manual has done nothing to resolve the failure of the DoT's EIA procedures to address whole routes rather than only small sections of roads (see also Chapter 10) and, in any case, applies only to new entries to the Roads Programme since its publication. It includes some guidance on cumulative effects of related schemes, but only suggests that early consideration is desirable. No procedure is established to enable it to happen. The other major defect is the failure to consider realistic alternatives other than alternative routes. The fact that the new Manual is Volume 11 of the Design Manual for Roads and Bridges emphasises the late stage at which EIA is being applied; the decision to build a road is taken before EIA comes into play.

Local highway schemes

Road schemes promoted by local highway authorities come under the Town and Country Planning EIA Regulations and not the Highways EIA Regulations. However, because there has been little Government guidance on carrying out EIA for road schemes other than the DoT's Manual of Environmental Appraisal and the Departmental Standard HD 18/88, most local highway authorities have followed the procedures of the MEA and Standard. The key differences are that if the DoT's methods are followed they will invariably focus on the limited framework approach without addressing direct and indirect effects of the proposal in full, as required by the Directive and the Planning EIA Regulations. Although the provision of certain information listed in Annex III of the Directive as 'information to be supplied by the developer' is at the discretion of the Member State government, the Planning EIA Regulations list this as information which may be included in an ES (Schedule 3[3]). The Highways EIA Regulations, by contrast, leave out a large proportion of the information listed in Annex III. The Departmental Standard explicitly stated that certain information listed in Annex III, such as that regarding the use of natural resources, need not be addressed specifically in an ES. This has now been superseded by the new Manual which no longer makes specific exclusions.

Under the Planning EIA Regulations, a local authority Planning Department is much more likely to ask for further information (as it is entitled to, until satisfied) from a Highways Department, including relevant aspects of the optional information

categories, than the DoT is to ask itself! The Highways Regulations require only the minimum of information under the Directive, without detailing additional types of information that can be supplied or might be appropriate (although Annex III is referred, to its contents are not). The revised manual has made no difference to the Highways Regulations which remain unamended.

Since local highway schemes go through 'normal' planning procedures, albeit deemed planning consent by the county council, ESs produced by local authorities may be more likely to address wider planning issues, including the possible implications of the scheme for consequential development attracted to the new road. There is also likely to have been more opportunity to influence early ideas for local road schemes through the structure and local plan processes so that where local highway schemes do come forward there should already have been a chance to address the question of need for the road. This is manifestly not the case with DoT promoted schemes.

Electricity and Pipe line Works (Assessment of Environmental Effects) Regulations 1989/90 and as amended by 1996 SI No. 422

These electricity regulations appeared considerably later than those for other Departments, giving rise to uncertainty, particularly about the status of nuclear power stations which are explicitly included in Annex I of the Directive. They originally came into force on 9 February 1989, seven months later than the majority of the other regulations. New Regulations were issued as a consequence of the privatisation of the electricity industry under the Electricity Act 1989. These new Regulations came into force on 31 March 1990 (SI 442).

The Regulations cover all electricity-generating stations and activities requiring consent (including deemed planning consent) from the Secretary of State for Energy (now Trade and Industry), other than those that fall under the Town and Country Planning Regulations and are therefore subject to local authority control (ie power stations of less than 50 MW capacity).

Power stations

Thermal power stations with a heat output of 300 MW or more and nuclear power stations fall under the mandatory requirements of Annex I of the Directive. Unfortunately, the wording in the Town and Country Planning Regulations was, when first in force, somewhat ambiguous.

Schedule 1(2) of the original Town and Country Planning Regulations stated:-

> "A thermal power station or other combustion installation with a heat output of 300 megawatts or more, other than a nuclear power station or other nuclear reactor."

It was not clear from this whether the threshold of 300 MW applied to thermal power stations and that all nuclear power stations or reactors should also be subject to mandatory EIA; or whether only thermal power stations greater than 300 MW required mandatory EIA and nuclear stations did not. This undoubtedly needed clarification. As a result of the passing of the Electricity Act 1989 both the Electricity and the Town and Country Planning Regulations were amended to take account of the fact that, under S.36 of the 1989 Electricity Act, proposals for generating stations below 50 MW output would fall under the normal planning regime.

The amended Electricity Regulations refer to 'generating stations' as defined in S.64 of the 1989 Electricity Act:-

> "in relation to a generating station wholly or mainly driven by water, includes all structures and works for holding or channelling water for a purpose directly related to the generation of electricity by that station."

This definition clearly includes nuclear power stations, as do the amended Town and Country Planning Regulations (SI 367, 1990):-

Paragraph (1)2 of Schedule 1 now reads:

> "2(a) A thermal power station or other combustion

> installation with a heat output of 300 megawatts or more (not being an installation falling within paragraph (b)); and
> (b) A nuclear power station or other nuclear reactor (excluding a research installation for the production and conversion of fissionable and fertile materials, the maximum power of which does not exceed 1 kilowatt continuous thermal load)."

It is now quite clear that nuclear power stations are covered fully by the Regulations. However, it is not altogether clear why generating stations appear in Schedule 1 of the Town and Country Planning Regulations in the first place. The consenting authority for such projects is the Secretary of State for Trade and Industry and the relevant regulations are the Electricity Regulations.

The 1990 Regulations were amended by the Electricity and Pipe-line Works (Assessment of Environmental Effects) (Amendment) Regulations 1996, SI No. 422 which now require an assessment in respect of proposals to extend any type of generating station only where the development is likely to have significant effects on the environment.

Overhead transmission lines

Environmental impact assessments are not generally required for overhead transmission lines of less than 10 miles in length. Yet again the problem is the absence of an appropriate consent procedure. The erection of overhead power lines less than 10 miles in length, while falling under the normal planning regime as opposed to requiring deemed consent from the Secretary of State for Trade and Industry, is defined as permitted development under the GDO 1988 and 1995. Hence there is no effective consent procedure to which an EIA requirement can be tied without bringing development which is currently exempt into the consent procedures.

The case study of Wilton Power Station in Chapter 10 illustrates the major problems associated with EIA implementation for power transmission lines. Currently, there is no requirement that the power transmission line requirements be considered as part of the EIA for the power station. Yet the need for transmis-

sion lines from a new power station is entirely dependent on the existence of the project and therefore should be considered as part of the EIA.

It is particularly important that piecemeal assessment and consent procedures should not allow a developer to pass the responsibility of assessing all likely environmental impacts on to another company or agency, as is currently allowed under the Electricity EIA Regulations.

The Environmental Assessment (Afforestation) Regulations 1988

These Regulations came into force on 15 July 1988 and again reflect the difficulties of implementing EIA in the UK where no formal consent procedure exists. The Regulations, in line with the Directive, deal only with afforestation; there is no provision for EIA for tree felling (nor is this possible in the UK without either amendment of the Directive or the inclusion of forestry projects within the EIA Regulations to be drawn up under S.15 of the Planning and Compensation Act 1991, or for built development within forestry operations, eg forest roads.

There is no 'consent' system for forestry projects in the UK. Instead, the Government has resorted to the existing forestry grant aid scheme as the nearest approximation to a consent procedure available. The Forestry Commission, therefore, does not have the power to incorporate EIA procedures where no grant is sought. This system is currently under review following action by the European Commission.

Article 8 of the Directive requires that the information gathered in pursuance of the Directive's requirements 'must be taken into consideration in the development consent procedure', and a development consent is defined in Article 1 to mean the decision of the competent authority or authorities 'which entitles the developer to proceed with the project'. Article 2(2) permits the assessment procedure to be integrated into existing procedures for consent or failing this 'into other procedures or into procedures to be established to comply with the aims of this Directive'.

Member States therefore have considerable discretion about how and where to implement the procedures, but the implica-

tion is that for a project falling within Annex I or Annex II there must be a power of a competent authority to make a decision that 'entitles' the developer to proceed. Although 'entitles' is not defined, it is likely that the courts would interpret this to imply a power to prohibit the development. It cannot be restricted to mean solely a decision of a competent authority which may or may not assist the developer to proceed (ie by giving financial aid).

While there have been few examples of forestry proposals in recent years without grant aid, it is questionable whether that justifies the limitation of EIA solely to grant-aided projects. The lack of non-grant aided projects in recent years has been largely due to the removal in 1988 of tax concessions which previously encouraged widespread commercial afforestation and had led to projects proceeding without grant aid. However, it is precisely possible future changes in policy that make it desirable for the EIA mechanism to be already in place, in the same way as with EIA and agriculture (Sheate and Macrory, 1989).

The Forestry Commission published its guidelines for EIA in the form of a booklet, 'Environmental Assessment of Afforestation Projects' (August 1988). There are few thresholds to indicate when a proposal is likely to be subject to EIA, each being decided on a case-by-case basis. EIA is, however, considered to be more likely for any new planting in a National Nature Reserve or SSSI, or in other nationally-designated areas. The only occasion when an EIA must be carried out is when a proposal in a designated area is for more than 100 ha. This threshold may imply that proposals below 100 ha need not be subject to EIA, when in fact smaller projects may be highly damaging in sensitive locations. The threshold also only applies to designated areas.

An example of a forestry project which might have been expected to qualify for an EIA (had the regulations applied) but did not is that of the forestry scheme proposed at Glen Dye in Scotland which is addressed in detail in Chapter 9.

There is nothing in the Regulations to require the Forestry Commission to carry out the assessment procedure in relation to its own afforestation schemes. Section 1(4) of the Forestry Act 1967 gives the Minister of Agriculture, Fisheries and Food

the power to issue directions to the Commissioners and this power could be employed to require them to carry out environmental-assessment procedures in relation to their own projects. So far this has not been necessary because the Forestry Commission has applied similar criteria to its own projects. However, there is no requirement in the Regulations or guidance to indicate this. It is unfortunate that a more formal statement (other than ministerial statements in Parliament or press notices) has not been required as part of the implementing regulations. The decision of the European Court in EC Commission v Belgium (1982 CMLR 627) requires that implementation of Directives be achieved in a form that is open and not easy to change.

The Directive does not explicitly require that the competent authority is a distinct body from the proposer of the development and envisages that a 'developer' can be a 'public authority which initiates a project' (Article 2). It is questionable whether an internal decision about whether to proceed with the proposal might amount to a decision 'which entitles the developer to proceed'. There is a strong case for arguing that the final decision in respect of a Forestry Commission proposal which requires EIA should rest with Agriculture or Environment Ministers. Indeed, the proposals concerning land drainage (see below) take precisely that course.

It was just this sort of difficulty over what constitutes a 'competent' authority that caused the UK Government to re-think its privatisation proposals for the water industry and propose in July 1987 an independent regulatory authority, the National Rivers Authority. This followed a legal opinion sought by CPRE (Jacobs and Shanks, 1986) which suggested that it would be unlikely that private water companies could be regarded as 'competent' authorities in ensuring their own compliance with EC water-pollution directives. While the Forestry Commission is a public authority primarily with forestry development responsibilities, it also has a specific promotional role which arguably creates a conflict of interest. It is not at all clear that the Forestry Commission's status as a Government department justifies its exemption from the provisions of the regulations, or that it is an appropriate competent authority for the purposes of EIA.

The role of the Minister to make directions is central to the EIA procedures relating to forestry projects. First, an applicant

for a grant may apply (appeal) to the Minister for a direction to overrule a decision of the Forestry Commissioners that environmental information is required (Regulation 6). Second, under Regulation 7 the Minister may give a direction of his own that environmental information is required where the Commissioners 'have decided to the contrary'. This protective power of the Minister is of critical importance in the light of the Commission's statutory duties to promote afforestation and provides that the Government can ensure that the obligations under the Directive are applied to particular projects. However, there are fundamental problems with the present drafting.

The direction to overrule the Forestry Commission can only be employed where the Commissioners 'have decided to the contrary' (ie that no environmental information is required). Under Regulation 4, a person seeking a grant may apply in advance to the Commission asking whether or not an environmental assessment will be required. Regulation 4(5) provides that if the Forestry Commission does not give a written opinion within four weeks, 'it shall be presumed that in their opinion environmental information would not be required'. Could the Minister at that point use his power under Regulation 7? It is not clear whether a 'presumed' opinion of the Commission under Regulation 4 falls within the terms of Regulation 7 - ie that the Commission 'have decided to the contrary'. If there is doubt about this (which there appears in the present text), it should be remedied.

Moreover, Regulation 7 provides no time limits for the exercise of the Minister's powers. Can he use them only before an application for grant is actually made? Or could he issue a direction at any time before the final decision of the Commissioners is made?

These regulations and the way in which EIA implementation is linked to the grant-aiding procedure are currently under review following EC infringement action in 1991.

The Land Drainage Improvement Works (Assessment of Environmental Effects) Regulations 1988

These regulations (as amended by 1995 SI No. 2195) came into force on 16 July 1988 and apply to land-drainage improvement works carried out by the National Rivers Authority (now

the new Environment Agency), internal drainage boards and local authorities. These cover Annex II Class 1(c) projects ('water management projects for agriculture'). In themselves, the procedures appear to fulfil the obligations under the Directive in respect of such public authority works. The authorities must publicise all proposals for improvement works, leaving the Minister (for Agriculture, Fisheries and Food in England) to decide whether the Directive applies, if representations are made to that effect and the authority does not propose to prepare a statement (Regulation 2 [b]); and where an ES is prepared, the decision to proceed with the development rests with the Minister if objections are not withdrawn (Regulation 8[3]). These procedures avoid some of the problems associated with the Forestry Commission arrangements.

The important 'protective' role of the Minister both in relation to requiring an environmental statement and in making the final consent is conditional upon representations being made and not withdrawn (Regulations 3[3] and 8[3]). Unwithdrawn representations may be an indicator of likely significant impact, but it is questionable whether the overseeing power of the Minister should depend on this happening. At the very least, the Minister should have an unrestricted power to require that an ES be prepared in any particular case. It is also preferable that he should be the final arbiter in all cases.

The regulations do not apply to any drainage works or other water-management projects carried out by private individuals or bodies. Unless there are convincing arguments that no water-management project for agriculture carried out by private individuals has a significant effect on the environment, it appears that these Regulations do not fully implement the obligations under the Directive with respect to such works.

The Environmental Assessment (Salmon Farming in Marine Waters) Regulations 1988

These Regulations came into force on 15 July 1988 and apply to applications for consent for salmon farming in marine waters to the Crown Estate Commissioners (CEC). These Regulations apply only to Scotland. While they are made under the European Communities Act 1972 by the Secretary of State for

Scotland, the consent procedure is entirely under the jurisdiction of the Crown Estate Commissioners. There is no provision in the Regulations for the Secretary of State for Scotland to intervene. The CEC have set a threshold of 6,000 or 12,000 square metres depending on locality. Apart from the fact that surface area alone is a questionable criterion to use, these thresholds effectively exclude almost all marine fish farm developments from the need for assessment.

There has been considerable disquiet over the implementation of these Regulations in Scotland. The limited application of EIA to Annex II (1)(g) projects in Scotland presumes that there is no salmon breeding outside Scotland in the UK which may not always be true in the future. It has also been anomalous that only salmon farming is covered in the English version of the Directive. This was the consequence of a mis-translation from the French - it should have referred to salmonids (the salmon family) which includes trout and char. The UK Government clearly took advantage of the limitations of implementation under S.2(2) of the European Communities Act 1972. Had the Directive been implemented originally under primary legislation in the UK, EIA could have been applied more widely to fish farming, including inland trout farming as intended, without great difficulty. This could have been remedied by the Regulations under S.15 of the Planning and Compensation Act 1991 (see above) though the Government chose not to. It should now be resolved as a result of the proposed amendments to the Directive by the European Commission (see Chapters 3 and 4).

The Harbour Works (Assessment of Environmental Effects) Regulations 1988 and 1992

These Regulations came into force on 3 August 1988 and relate to requirements for EIA to accompany an application for a harbour revision order or harbour-empowerment orders made to the Minister of Agriculture, Fisheries and Food or to the Secretary of State for Transport. The Regulations amend the Harbours Act 1964. The relevant Minister decides whether an EIA is needed. Where EIA is required, an ES must be submitted in accordance with Annex III of the Directive to the extent that the Secretary of State considers it relevant and that the applicant may reasonably be required to provide the information.

Transport and Works Rules 1992 and Regulations 1995

Since 1 January 1993 new rail, light rail and guided transport systems have been subject to EIA in accordance with the Transport and Works (Applications and Objections Procedure) Rules 1992 (SI No. 2902) made under the Transport and Works Act 1992. Amendments to the Rules and the specific obligations of the Secretary of State to take into account the ES and opinions expressed relating to it are contained in the Transport and Works (Assessment of Environmental Effects) Regulations 1995 (SI No. 1541).

The first example to undergo these new procedures was a proposed new freight railway scheme - Central Railway - currently controversial (1996) due to the likely impact the railway would have on residents and properties in southern England. The procedure replaces the previous Private Bill procedure and involves the equivalent to a Ministerial Order, with an application being made to the Secretary of State, the principle of which is then debated in Parliament. That application must be accompanied by an ES. Detailed consideration is left to public local inquiries if it is passed by Parliament. In this particular case, the Bill was rejected by the House of Commons (effectively killing the proposal) in a debate on 24 July 1996 on the grounds of inadequate consideration of the environmental impact and on questionable financing.

Appendix 8

SHEATE, W.R. (1997), The Environmental Impact Assessment Amendment Directive 97/11/EC: A Small Step Forward? *European Environmental Law Review*, Vol. 6 (8/9), pp 235-243.

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Contents

Country Reports

the airport. It is said that this will save 70,000 lorry journeys a year on roads from the Peak District to Manchester Airport.
Source: Department of the Environment, Transport and the Regions, News Release, 23 June 1997.

Transport Policy
The Deputy Prime Minister has announced a fundamental review of transport policy, to be published in a White Paper in Spring 1998. Meanwhile, a "far-reaching and broadly based" strategic roads review was launched on 19 June, to determine the role of roads in an integrated transport policy.
Source: Department of the Environment, Transport and the Regions, News Releases, 5 June 1997, 19 June 1997.

Northern Ireland

The following measures have been passed:
- The Plant Protection Products (Fees) (Amendment) Regulations (Northern Ireland) 1997, SRNI 1997 No 246, in force 24 June 1997;
- The Carriage of Dangerous Goods (Classification, Packaging and Labelling) and Use of Transportable Pressure Receptacles Regulations (Northern Ireland) 1997, SRNI 1997 No 247, in force from various dates;
- The Carriage of Dangerous Goods by Road Regulations (Northern Ireland) 1997, SRNI 1997 No 248, in force 1 July 1997;
- The Carriage of Dangerous Goods by Road (Driver Training) Regulations (Northern Ireland) 1997, SRNI 1997 No 249, in force 1 July 1997;
- The Protection of Water Against Agricultural Nitrate Pollution (Amendment) Regulations (Northern Ireland) 1997, SRNI 1997 No 256, in force 28 July 1997, amending SRNI 1996 No 217.

The EIA Amendment Directive

The Environmental Impact Assessment Amendment Directive 97/11/EC – A Small Step Forward?

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Summary: The Environmental Impact Assessment ("EIA") Amendment Directive 97/11/EC was finally agreed in March 1997 and is due to be brought into force in Member States by 14 March 1999. With the new imperative of sustainable development since the Rio Earth Summit in 1992, it was hoped that amendments proposed to the original EIA Directive 85/337/EEC would improve on the original legislation, reflecting EIA best practice throughout Europe and benefit from the lessons of EIA systems worldwide. While the Amendment Directive will bring about a number of significant improvements, it falls short of bringing more radical changes, such as formal scoping, post-project monitoring and enhanced public participation (common in many other systems). Key changes are summarised in Table 1 which indicates where changes have occurred to the articles of the original Directive. This is supplemented by a more detailed discussion of the various issues raised.

I. Amending the EIA Directive

Introduction
The EIA Amendment Directive 97/11/EC[1] arose out of the five year review required by the original EIA Directive 85/337/EEC.[2] The review was supposed to have been produced five years after notification, i.e., in July 1990. However it was not published until April 1993 due to various delays in getting agreement within the Commission and among the Member States. Consequently that report was already about two years out of date by the time it was published.[3] A discussion of the outcome of the review and the various

1 OJ, 3 March 1997, L 73.
2 OJ, 5 July 1985, L 175.
3 COM(93) 28, 2 April 1993: Report from the Commission on the Implementation of Directive 85/337/EEC.

The EIA Amendment Directive

Table 1: Summary of key changes introduced by the Amendment Directive 97/11/EC

EIA Directive 85/337/EEC *Article numbers:*	**EIA Amendment Directive 97/11/EC** *Amendments to 85/337/EEC articles etc. unless stated otherwise.*
Article 1 Definitions; exclusion of defence projects and projects given consent through an act of national legislation.	*Article 1* No change
Article 2 Member States to adopt measures necessary to implement EIA. Exemption in exceptional cases.	*Article 2* – Article 2a to allow MSs to provide for a single consent procedure for both EIA and IPPC (96/61/EC). – Exemption, but not where it would prejudice consideration of transboundary impacts by another MS.
Article 3 EIA shall identify, describe and assess direct and indirect effects on: – human beings, fauna and flora – soil, water, air, climate and the landscape – interactions between the above – material assets and the cultural heritage.	*Article 3* – Ditto except: interactions between first, second and third indents where the third is material assets and the cultural heritage.
Article 4 Annex II projects to be subject to assessment where MSs determine their characteristics so require.	*Article 4* – Annex II projects shall be determined by MSs through (a) a case by case examination or (b) thresholds or criteria set by the MS, or both. – Where a case by case examination is carried out or thresholds or criteria set selection criteria in (new) Annex III shall be taken into account. – Determination by competent authority under paragraph 2 (i.e. which Annex II projects require EIA) to be made available to the public.
Article 5 Content of the information provided by the developer. Reference to (old) Annex III.	*Article 5* – Old Annex III becomes new Annex IV (see below) – Competent authority shall give an opinion on the information to be supplied by the developer *if* the developer requests it, i.e. no formal requirement for scoping. Competent authority shall consult developer and environmental authorities before giving opinion. Article gives discretion to MSs to require such an opinion irrespective of whether the developer requests it, i.e. an MS can introduce mandatory scoping if it wishes (or already has it). – Information to be provided is as before except that the requirement to consider alternatives has been brought from old Annex III into the text of Article 5 as an additional part of the required information. Same wording as before except with the loss of "where appropriate".
Article 6 Consultation of environmental authorities on the request for development consent. Public consultation "before the project is initiated".	*Article 6* – Requires environmental authorities to be consulted on the information supplied by the developer as well as on the request for development consent. – MSs to ensure that request for development consent and any information gathered pursuant to Article 5 are made available to the public within a reasonable time to give the public the opportunity to express an opinion "before the development consent is granted".
Article 7 Requirement to inform another MS where transboundary effects of the proposal are likely.	*Article 7* – More detailed requirements for consideration of transboundary effects, including specific arrangements for consultation with affected MSs and their public, and the exchange of information. This enhanced article is to implement the UNECE Espoo Convention on EIA in a transboundary context.

The EIA Amendment Directive

Article 8 Information gathered pursuant to Article 5, 6 and 7 to be taken into consideration in the development consent procedure.	*Article 8* – The results of consultations and the information gathered ... etc to be taken into consideration.
Article 9 Competent authority to inform public of content of decision and any conditions attached; reasons and considerations on which decision is based where MS's legislation so provides. Detailed arrangements left to MSs. Decision notified to another MS where involved under Article 7.	*Article 9* – Competent authority to inform the public of: – the content of the decision and any conditions attached; – the main reasons and considerations on which the decision is based (i.e., irrespective of whether a MS's legislation so provides); – a description, where necessary, of the main measures to avoid, reduce and, if possible, offset the major adverse effects. – Notify any MS consulted under Article 7 with the same information.
Article 10 Directive shall not affect obligations regarding limitations etc concerning industrial and commercial secrecy ...	*Article 10* – Ditto except that "with regard to commercial and industrial confidentiality, including intellectual property, ..."
Article 11 Member States to inform Commission of thresholds/criteria used for selection of Annex II projects.	*Article 11* – Ditto except that simplified given amendments to Article 4(2) above.
Article 12 Implementation within three years. Inform Commission of the text of national laws.	*Article 12* – No longer applies. Replaced by subsequent article of 97/11/EC (new provisions below).
Article 13 Directive shall not affect the right of MSs to lay down stricter rules.	*Article 13* – Deleted.
Article 14 Date Directive signed.	*Article 14* – No longer applies. Replaced by subsequent articles of 97/11/EC (new provisions below).
	New provisions (Articles 2 and 3 of 97/11/EC) – Five years after entry into force, review report to be produced and where appropriate further amendments proposed. – MSs to comply with the Directive by 14 March 1999. – MSs to inform the Commission of legislation etc. – Transitional arrangements: if a request for development consent submitted to a competent authority before the end of the time limit (i.e. 14 March 1999) the provisions of 85/337/EEC prior to these amendments shall continue to apply.
Annex I Mandatory projects (Article 4(1)), 9 main categories.	*Annex I* – Mandatory projects (Article 4(1)), 21 main categories.
Annex II Projects to be determined according to Article 4(2).	*Annex II* – Projects to be determined according to Article 4(2). Changes and additions to various categories, e.g. agriculture, infrastructure, tourism projects.
Annex III Information referred to in Article 5(1), to be supplied by the developer.	*New Annex III* – Selection criteria referred to in Article 4(3).
	New Annex IV – Information referred to in Article 5(1).

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stages of proposed amendments arising out of it can be found elsewhere.[4, 5] A summary of the key changes to be brought about by this new Directive 97/11/EC is given in Table 1. It is followed by a more detailed discussion of the various key issues raised as well as some of those that have been omitted. These follow the order of the articles of the original Directive.

The Relationship Between EIA and Integrated Pollution Prevention and Control (IPPC)

New Article 2a allows Member States to provide for a single consent procedure in order to fulfil the requirements of the EIA Directive and the requirements of Directive 96/61/EC on IPPC. Although there are some good reasons for bringing these two consent processes closer together, not least to avoid duplication in the provision of information, this may prove problematic in some Member States. In the UK, although the Government has issued guidance about the relationship between EIA and IPC/IPPC,[6] the two processes remain separate and are unlikely to be brought together in the near future, given that EIA and planning are dealt with primarily by local authorities, while IPC is administered by the Environment Agency.

Exemptions

Article 2(3) is amended by beginning "Without prejudice to Article 7, Member States may in exceptional cases, exempt a specific project in whole or in part from the provisions laid down in the Directive". Article 7 introduces more elaborate consultation requirements to allow the Espoo Convention on EIA in a Transboundary Context[7] to be ratified (see below). This modification to the exemption article prevents a Member State from exempting a particular project if it is likely to have transboundary impacts or where another Member State has requested that it be consulted.

Assessment of Effects on Various Aspects of the Environment

Article 3 is amended so that material assets and cultural heritage become part of the list for which interactions are to be assessed. Previously it had come after the requirement to consider interactions between human beings, fauna, flora and soil, water, air, climate and the landscape.

Mandatory and Non–mandatory Projects

Article 4 is amended to clarify the basis on which mandatory and non–mandatory projects are to be assessed. The five year review had highlighted the disparities between the ways in which Member States had implemented Annex II projects in particular. Some had used thresholds and/or criteria (set at high or low levels), others used a case by case basis, while some, e.g., the UK, used a combination of both, where thresholds/criteria are indicative only. The Commission sought to bring more consistency to the way in which EIA was applied in different Member States and so introduced a set of selection criteria which Member States must take into account when deciding how they will determine which Annex II projects shall be subject to EIA. To ensure that the most damaging projects will always be subject to EIA, a number of project categories have been moved from Annex II into Annex I, increasing certainty to Member States and developers that EIA will be required (see below for details). The implication of this change is that Member States will have considerable discretion over which Annex II projects will be subject to EIA.

Article 4 will now require Member States to determine which Annex II projects will be subject to EIA on either a case by case basis or through the use of thresholds/criteria, or both. Whichever approach is chosen Member States must take into account the new selection criteria listed in Annex III. This is a particularly interesting development since it was an idea that was abandoned during the drafting of the original EIA Directive in the early 1980s. It was revived during the review and amendment process following the recognition that more consistency across the Community was needed.[8] One of the criteria (Annex III 2(e)) is whether the project will affect areas designated under the Birds[9] and Habitats[10] Directives. Another (Annex III 2(f)) covers areas in which the environmental quality standards laid down in Community legislation have already been exceeded.

Another interesting aspect of the amendments to Article 4 is that the competent authority must now make public the determination of whether an Annex II project requires an EIA, either on a case by case basis or if thresholds/criteria are set. This has been a problem in the UK where a developer may apply to a competent authority for a determination as to whether an Annex II project requires EIA, but is under no obligation to do so and more often than not will decide that an EIA is needed and simply go ahead with its preparation. Had the developer asked the competent authority (e.g. local authority) for a determination, the local authority would have had to place that determination on the public register, thereby alerting the public that an EIA was to be produced (or not). This is important to ensure that the first the public hear about an EIA is not when the environmental statement is published at the time of the application for development consent. Informal opportunities for public involvement are then facilitated earlier in the process than would otherwise formally be required. In the UK, it would appear that some amendment to the regulations will be needed to require developers to apply for a determination, unless the Government chooses to abandon a case by case approach (unlikely), currently combined with indicative thresholds/criteria to provide flexibility.

"Scoping"

The concept of scoping is widely recognised as one of the most important parts of the EIA process. Its aim is to

[4] Sheate, W R (1995), Amending the EC Directive (85/337/EEC) on Environmental Impact Assessment, [1995] EELR 77–82.
[5] Sheate, W R (1996), *Environmental Impact Assessment: Law and Policy – Making an Impact II*, Cameron May, London, (2nd edition) 300pp.
[6] Planning Policy Guidance Note 23: *Planning and Pollution Controls*.
[7] UNECE Convention on Environmental Impact Assessment in a Transboundary Context, Espoo (Finland), 25 February 1991.
[8] See CPRE (1992) "Mock" EC Directive on Environmental Assessment: Proposals for amending EC Directive 85/337/EEC, August 1992.
[9] Directive 79/409/EEC.
[10] Directive 92/43/EEC.

determine the parameters of the EIA, how widely the boundaries should be drawn, what alternatives should be considered, etc. Without a formal scoping stage key issues may arise at a much later stage of the process, frequently encouraging conflict, and at a stage when it is much more difficult to avoid impacts, to modify the proposal, or to introduce appropriate mitigation measures.

The European Commission had originally proposed a formal scoping stage.[11] This, however, was abandoned in later amendments to the amendments,[12] largely because the Commission knew that it was unlikely to succeed in getting such a requirement through the Council of Ministers. The European Parliament had wanted to go further, but some Member States, e.g., the UK and Germany, did not want to see what they regarded as any extension to the EIA process or anything that would create additional burdens on developers and local authorities. The resulting amendment to Article 5, in practice, takes us no further forward than the original Directive, leaving the discretion as to whether to go through a scoping process, in consultation with the competent authority, entirely to the developer. Best practice would suggest that not only is a formal scoping process necessary, but that that process should be a public one, involving the public as early as possible to identify key issues from the beginning. The original Commission proposal for scoping still omitted any public involvement and this new provision also leaves out the wider public. It does at least require the competent authority to consult the statutory environmental authorities if the developer requests scoping. It is difficult to see that this will bring about any more scoping than is already occurring on a voluntary basis. Those developers who are willing to go through scoping (and recognise its value) are probably already doing it. It is those who are not who would be most affected by a formal scoping process.

Content of the Information Provided by the Developer

The most significant amendment to Article 5 relates to the minimum information required from the developer. The previous Article 5(2) becomes 5(3), but otherwise the content of the list remains the same, except that the requirement to consider alternatives (sites, processes etc) has been brought from the old Annex III into the main body of the text:

"an outline of the main alternatives studied by the developer and an indication of the main reasons for his choice, taking into account the environmental effects;"

This is particularly important since, although the wording is largely the same except for the loss of "where appropriate", this same requirement previously had ambiguous authority in Annex III which (arguably) conferred a degree of discretion on Member States and developers about the extent to which all the points covered by Annex III had to be addressed. In the UK, the consideration of alternatives had been relegated to an optional extra at the discretion of the developer by appearing only in Regulation 3(3)(d) of the Town and Country Planning Regulations 1988.[13] The fact that the consideration of alternatives is now in the body of the text and part of the minimum information requirement is an important step forward, even though the discretion as to which alternatives should be studied would still appear to rest with the developer. A formal scoping stage would, of course, ensure that the alternatives studied were agreed with the competent authority in advance of the information being provided, and preferably with the public as well. The issue of alternatives is central to EIA and has been in urgent need of clarification in the European Union. This goes some way to doing that, since developers will no longer be able to claim that they are not required to provide information on alternatives.

This issue was highlighted in a recent appeal public inquiry in the UK, that of the Rock Characterisation Facility (RCF) in Cumbria, proposed by Nirex Ltd, as a prelude to applying for a deep nuclear waste repository.[14] The Inspector concluded[15] that the issue of alternatives was central to the case and that information on alternative sites should have been provided by Nirex, and that alternatives should not be confined just to sites, but should also address alternative processes. The Secretary of State for the Environment agreed that any future application for an RCF should include information on alternative site locations.[16]

Consultation

Article 6 has been clarified by 97/11/EC to make it clear that environmental authorities should be consulted on the information provided by the developer (e.g. the environmental statement), as well as on the request for development consent. The amended Article 6 also clarifies that the request for development consent and any information gathered during the EIA should be made available to the public within a reasonable time to allow the public to express an opinion "before the development consent is granted". This latter point clears up some misunderstanding in the original Directive where there was some conflict in the text. Old Article 6(2) referred to consultation "before the project is initiated" (which could be after consent had been given), whereas old Article 8 required the information gathered as a result of consultation to be taken into consideration in the development consent procedure.

Transboundary Effects

Article 7 is much expanded to take on the detailed requirements of the Espoo Convention on EIA in a Transboundary Context.[17] Once the Directive is implemented in Member States, the same Member States will then have ratified the Espoo Convention. This new Article specifies the information that must be provided to another Member State likely to be affected by a proposed project,

[11] COM (93) 575 final.
[12] COM (95) 720 final.
[13] 1988 SI No 1199.
[14] Sheate, W R (1996), The Search for a UK Nuclear Waste Disposal Facility: A Case Study of Disputed "Project" Definition under the EC Directive 85/337/EEC on EIA, *Environmental Policy and Practice*, Vol. 6 (2), pp. 75–86.
[15] Report of the Inspector, Mr C S McDonald, concerning the Appeal by UK Nirex Ltd into a proposed Rock Characterisation Facility (RCF) at Longlands Farm, Gosforth, Cumbria (1997).
[16] Secretary of State for the Environment Decision Letter to UK Nirex Ltd, 17 March 1997.
[17] *Supra* note 7.

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and makes provision for specific arrangements to be made to consult other affected Member States and their public, and the need to agree an appropriate timetable during which the consultation will take place. There will also need to be discussion between the relevant Member States over mitigation measures to eliminate or reduce transboundary effects. This provision goes beyond the minimum required by the Espoo Convention in that it is not restricted simply to the Appendix I list of projects in the Convention, although Espoo also gives guidance on selecting those projects likely to have significant transboundary effect not covered by Appendix I. This Article 7 provision therefore applies irrespective of whether a proposed project is an Annex I or II project where there are likely to be significant transboundary effects.

Decision-making

Article 8 is clarified so that the results of consultation, as well as the information gathered, are taken into consideration in the development consent procedure.

The amended Article 9 extends the information about the decision which is to be made public. In addition to the content of the decision and any conditions attached, the competent authority must also in future give the main reasons and considerations on which the decision is based. This is now irrespective of whether the Member State's legislation so provides, and will, for example, require the UK to amend its implementing regulations to require the reasons for giving or refusing consent to be published. In addition, the main measures to avoid, reduce or offset major adverse effects must also be published. The same information must be made available to another Member State where consulted under Article 7.

Commercial Confidentiality

A minor amendment has been made to Article 10, reflecting more recent concerns over intellectual property rights. Instead of the Directive not affecting the obligations on competent authorities regarding limitations concerning industrial and commercial secrecy, the wording will now be "with regard to commercial and industrial confidentiality, including intellectual property ...".

Information Provided by Members States to the European Commission

Article 11 has now been simplified, since clearer criteria for the selection of Annex II projects have been provided in Article 4(2) so that Member States are now required to inform the Commission of any criteria and/or thresholds adopted for the selection of projects. Previously, Article 11(2) had also referred to types of projects, which had led to some ambiguity.

Review of the Directive

As before, five years after entry into force of the amendment Directive 97/11/EC (20 days after publication in the OJ) the Commission shall send a report to the European Parliament and the Council on the effectiveness of the amended Directive 85/337/EEC, from which further amendments may be proposed (Article 2 of 97/11/EC).

Transitional Arrangements

The Amendment Directive is to be brought into force in Member States no later than 14 March 1999. Member States must inform the Commission of any laws, regulations and administrative provisions necessary to comply. To avoid the enormous problems associated with the transitional period between the EIA Directive being notified and coming into force in Member States (three years), the Amendment Directive makes clear that the requirements of the original Directive will continue to apply to projects where a request for development consent (i.e. consent application) occurs before 14 March 1999. The lesson has been well learned following the large amount of litigation over so-called "pipeline" cases during that original transitional period, where for many years there was ambiguity over whether it was the consent date or the application date that was significant in determining whether EIA was required. This was finally clarified, comparatively recently, in favour of the date of application, by the European Court of Justice in two key German cases.[18]

Annex I

Changes to Annex I have been particularly significant as a result of the urge to achieve greater consistency across the European Union. A number of project categories have been moved from the more discretionary Annex II into the mandatory requirement for EIA of Annex I.

The main new Annex I categories are:–

(9) Waste disposal installations: old paragraph 9 has been restructured as paras. 9 and 10 as follows:–
  (9) Waste disposal installations for the incineration, chemical treatment as defined in Annex IIA to Directive 75/442/EEC under heading D9, or landfill of hazardous waste (i.e. waste to which Directive 91/689/EEC applies).
  (10) Waste disposal installations for the incineration or chemical treatment as defined in Annex IIA to Directive 75/442/EEC under heading D9 of non-hazardous waste with a capacity exceeding 100 tonnes per day.

(11) Groundwater abstraction or artificial groundwater recharge schemes where the annual volume of water abstracted or recharged is equivalent to or exceeds 10 million cubic metres.

(12) (a) Works for the transfer of water resources between river basins where this transfer aims at preventing possible shortages of water and where the amount of water transferred exceeds 100 million cubic metres/year;
  (b) In all other cases, works for the transfer of water resources between river basins where the multi–annual average flow of the basin of abstraction exceeds 2000 million cubic metres/year and where the amount of water transferred exceeds 5% of this flow.

[18] *Bund Naturschutz in Bayern eV, Richard Stahnsdorf and Others v Freistaat Bayern*, Case C–396/92, Judgment of ECJ, 9 August 1994; *EC Commission v Germany*, (*Großkrotzenberg*), Case C–431/92, Judgment of ECJ, 11 August 1996: also [1996] 8 JEL 194.

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In both cases transfers of piped drinking water are excluded.

(13) Waste water treatment plants with a capacity exceeding 150,000 population equivalent as defined in Article 2 point (6) of Directive 91/271/EEC.

(14) Extraction of petroleum and natural gas for commercial purposes where the amount extracted exceeds 500 tonnes/day in the case of petroleum and 500,000 m^3/day in the case of gas.

(15) Dams and other installations designed for the holding back or permanent storage of water, where a new or additional amount of water held back or stored exceeds 10 million cubic metres.

(16) Pipelines for the transport of gas, oil, or chemicals with a diameter of more than 800 mm and a length of more than 40 km.

(17) Installations for the intensive rearing of poultry or pigs with more than:
- (a) 85,000 places for broilers, 60,000 places for hens;
- (b) 3,000 places for production pigs (over 30 kg); or
- (c) 900 places for sows.

(18) Industrial plants for the
- (a) production of pulp from timber or similar fibrous materials;
- (b) production of paper and board with a production capacity exceeding 200 tonnes per day.

(19) Quarries and open-cast mining where the surface of the site exceeds 25 hectares, or peat extraction, where the surface of the site exceeds 150 hectares.

(20) Construction of overhead electrical power lines with a voltage of 220 kV or more and a length of more than 15 km.

(21) Installations for the storage of petroleum, petrochemical, or chemical products with a capacity of 200,000 tonnes or more.

The following categories are modifications from the original EIA Directive 85/337/EEC:

(2) Nuclear power stations and other nuclear reactors, now includes "the dismantling or decommissioning of such power stations or reactors".

(3) This paragraph has been expanded and clarified:
- (a) Installations for the reprocessing of irradiated nuclear fuel.
- (b) Installations designed:
  - for the production or enrichment of nuclear fuel,
  - for the processing of irradiated nuclear fuel or high-level radioactive waste,
  - for the final disposal of irradiated nuclear fuel,
  - solely for the final disposal of radioactive waste,
  - solely for the storage (planned for more than 10 years) of irradiated nuclear fuels or radioactive waste in a different site than the production site.

(4) This paragraph has been expanded:
- Integrated works for the initial smelting of cast-iron and steel;
- Installations for the production of non-ferrous crude metals from ore, concentrates or secondary raw materials by metallurgical, chemical or electrolytic processes.

(6) Integrated chemical installations has been greatly clarified after considerable dispute since implementation of the EIA Directive:

Integrated chemical installations, i.e. those installations for the manufacture on an industrial scale of substances using chemical conversion processes, in which several units are juxtaposed and are functionally linked to one another and which are:
- (i) for the production of basic organic chemicals;
- (ii) for the production of basic inorganic chemicals;
- (iii) for the production of phosphorus-, nitrogen- or potassium-based fertilizers (simple or compound fertilizers);
- (iv) for the production of basic plant health products and of biocides;
- (v) for the production of basic pharmaceutical products using a chemical or biological process;
- (vi) for the production of explosives.

(7) This paragraph has been expanded:
- (a) Construction of lines for long-distance railway traffic and of airports with a basic runway length of 2,100 m or more;
- (b) Construction of motorways and express roads;
- (c) Construction of a new road of four or more lanes, or realignment and/or widening of an existing road of two lanes or less so as to provide four or more lanes, where such new road, or realigned and/or widened section of road would be 10 km or more in continuous length.

(8) This paragraph has been clarified:
- (a) Inland waterways and ports for inland-waterway traffic which permit the passage of vessels of over 1,350 tonnes;
- (b) trading ports, piers for loading and unloading connected to land and outside ports (excluding ferry piers) which can take vessels of over 1,350 tonnes.

Annex II

The following are the main changes to project categories of Annex II where Member States should determine whether an EIA is required on either a case by case basis, or on the basis of thresholds or criteria, or both:

(1) *Agriculture*: a number of categories have moved to Annex I. The main changes or additions are:
- (c) Water management projects now specified as including irrigation and land drainage projects;
- (d) Initial afforestation and deforestation for the purposes of conversion to another type of land use;
- (e) Intensive livestock installations (projects not included in Annex I);
- (f) Intensive fish farming.

(2) *Extractive industry*: A new category of Mineral industry has resulted in a number of categories moving out of category (2). Most other changes are minor modifications for clarification, except a new category (c) "Extraction of minerals by marine or fluvial dredging".

(3) *Energy industry*: Production, enrichment or reprocessing of nuclear fuels have now moved to Annex I (above). Other changes are primarily minor clarifications except (i) "installations for the harnessing of wind power for energy production (wind farms)".

(4) *Production and processing of metals*: Categories relating to motor vehicles, shipyards, construction and repair of aircraft, railway equipment, explosives and roasting and sintering of metallic ores remain the same ((f) to (k)).

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Otherwise, some re-structuring and clarification of metal production and processing categories, notably:

(a) Installations for the production of pig iron or steel (primary or secondary fusion) including continuous casting;
(b) Installations for the processing of ferrous metals:
  (i) hot-rolling mills;
  (ii) smitheries with hammers;
  (iii) application of protective fused metal coats;
(c) Ferrous metal foundries;
(d) Installations for the smelting, including the alloyage, of non-ferrous metals, excluding precious metals, including recovered products (refining, foundry casting etc.);
(e) Installations for the surface treatment of metals and plastic materials using an electrolytic or chemical process.

(5) *Mineral industry*: this new category now includes glass manufacture (and glass fibre) and two categories taken from the old extractive industry section, e.g. coke ovens, cement manufacture. It also includes asbestos where not under Annex I, smelting of mined substances and manufacture of ceramic products, including roofing tiles, bricks, tiles, stoneware or porcelain.
(6) *Chemical industry*: Covers those not in Annex I and is as in original Directive.
(7) *Food industry*: No change.
(8) *Textile, leather, wood and paper industries*: Some minor clarifications, but otherwise little change. Paper and board production is included for those projects not covered by Annex I.
(9) *Rubber industry:* No change.
(10) *Infrastructure projects*: Some amendments and shuffling of projects has occurred to create a more logical category of Tourism and leisure (below). The main changes/additions are:
  (b) Urban development projects have been clarified as including the construction of shopping centres and car parks;
  (c) Construction of railways and intermodal transshipment facilities, and of intermodal terminals (projects not included in Annex I);
  (f) Inland-waterway construction in addition to canalization and flood-relief works;
  (k) Coastal work to combat erosion and maritime works capable of altering the coast through construction, excluding the maintenance and reconstruction of such works;
  (l) Groundwater abstraction and artificial recharge not covered in Annex I;
  (m) Works for the transfer of water resources not included in Annex I.
(11) *Other projects*: Holiday villages have moved to (12) (below). Otherwise, the rest remain virtually the same as before.
(12) *Tourism and leisure*: this is a new and more logical category. It now covers:
  (a) Ski-runs, ski-lifts and cable-cars and associated developments;
  (b) Marinas;
  (c) Holiday villages and hotel complexes outside urban areas and associated developments;
  (d) Permanent camp sites and caravan sites;
  (e) Theme parks.
(13) This final category clarifies the definition of modifications to projects which had previously caused some dispute:
  - Any change or extension of projects listed in Annex I or Annex II, already authorized, executed or in the process of being executed, which may have significant adverse effects on the environment;
  - Projects in Annex I, undertaken exclusively or mainly for the development and testing of new methods or products and not used for more than two years.

Annex III

The selection criteria for deciding on which Annex II projects should be subject to EIA, or how thresholds/criteria should be determined, are reproduced below:

SELECTION CRITERIA REFERRED TO IN ARTICLE 4(3)

1. Characteristics of projects

The characteristics of projects must be considered, having regard, in particular, to:

- the size of the project,
- the cumulation with other projects,
- the use of natural resources,
- the production of waste,
- pollution and nuisances,
- the risk of accidents, having regard in particular to substances or technologies used.

2. Location of projects

The environmental sensitivity of geographical areas likely to be affected by projects must be considered, having regard, in particular, to:

- the existing land use,
- the relative abundance, quality and regenerative capacity of natural resources in the area,
- the absorption capacity of the natural environment, paying particular attention to the following areas:
  (a) wetlands;
  (b) coastal zones;
  (c) mountain and forest areas;
  (d) nature reserves and parks;
  (e) areas classified or protected under Member States' legislation, special protection areas designated by Member States pursuant to Directive 79/409/EEC and 92/43/EEC;
  (f) areas in which the environmental quality standards laid down in Community legislation have already been exceeded;
  (g) densely populated areas;
  (h) landscapes of historical, cultural or archaeological significance.

3. Characteristics of the potential impact

The potential significant effects of projects must be considered in relation to criteria set out under 1 and 2 above, and having regard, in particular, to:

- the extent of the impact (geographical area and size of the affected population),
- the transfrontier nature of the impact,
- the magnitude and complexity of the impact,
- the probability of the impact,
- the duration, frequency and reversibility of the impact.

Annex IV
The old Annex III on the information to be provided by the developer is now reproduced as Annex IV. The only change has been the dropping of the "where appropriate" qualification in respect to the consideration of alternatives (see Content of the Information Provided by the Developer, above).

II. Omissions

As can be seen from the discussion above, although the amendments are welcome and will bring about improvements to EIA on the ground, there are a number of things that the Amendment Directive 97/11/EC does not do. These include, *inter alia*:

- project definition
- formal scoping
- enhanced/earlier public participation
- post-project monitoring
- strategic environmental assessment.

Project definition has been a notable bone of contention since implementation of the EIA Directive, manifesting itself particularly in the "salami slicing" approach to road building/upgrading,[19] and where individual projects can be regarded as part of a larger project of various associated elements, e.g. overhead power lines as part of a new power station,[20] or the relationship between different stages of project development, e.g. investigative boreholes and rock characterisation facilities as precursors to a deep radioactive waste repository.[21] The absence of formal scoping makes this more of a problem than it needs to be, discouraging the development of a consensus on the parameters of the EIA, including what might be considered to be the limits of the "project" in question. Clearly, the Commission has chosen not to open this particular can of worms, since it would inevitably overlap with the issue of strategic environmental assessment (SEA), i.e., the inter–relationship between projects, programmes and plans, which the Commission is taking forward as a separate Directive.[22] This is one of the difficulties of taking project EIA and SEA forward through separate legislation, when actually a tiered approach would remove the need for such a semantic distinction.[23] The Commission has also chosen to do nothing about the exemption of defence installations or the issue of projects subject to parliamentary approval.[24]

Significantly, the opportunity to introduce formal scoping has once again been missed, and so an increase in voluntary scoping is the only hope in the near future of improving this most important stage of the EIA process. Likewise with post-project monitoring. Both of these stages present opportunities for enhancing the participation of the public in EIA, at the earliest stages in the case of scoping, and in helping feedback to improve EIA procedures and methodologies in the latter case. Other than where there are transboundary effects, the Amendment Directive does little to improve public consultation or (more active) participation. Again, it is now in the hands of enlightened developers, consultants, local authorities and NGOs to encourage early involvement of the public and to enter into all-important monitoring arrangements.

III. Conclusions

With the Amendment Directive now agreed we will have to wait until March 1999 for these changes to be implemented. While they are in the right spirit and to be very much welcomed, political expediency has inevitably won the day over the need for improved decision-making processes as part of the quest for more sustainable development. And while the amendments will no doubt bring greater continuity between Member States and remove some of the points of dispute, there are plenty of other areas where the practical requirements of the European Union's EIA legislation fall far short of best practice. Meanwhile, the draft SEA Directive[25] continues (deliberately) in isolation from the project EIA Directive. Politically this is even more difficult than the EIA Amendment Directive, since there is likely to be continued opposition from certain Member States.[26] The history of the EIA Directive has been a long and rather tortuous one and the SEA Directive looks likely to follow suit. Already considerably watered down from earlier drafts (omitting policies, for example), it is likely to be quite a few years before such a piece of legislation comes into force, if at all. If it does, then perhaps in ten or fifteen years time there may have to be consolidation of EIA and SEA into one body of legislation, more than 30 years after initial debates about the need for EIA/SEA in the EC, and nearly 40 years after just such a piece of legislation was passed in the United States.[27] The EIA Directive originally provided an impetus to develop procedures and methodologies for EIA in Member States (and elsewhere) even before the Directive was agreed. Now, it seems, best practice even in the EC has long since overtaken the legislation which once spawned it. The Amendment Directive has taken one small step in the right direction, but in other regards there is a much longer journey ahead.

[19] *Supra* note 18.
[20] Sheate, W R (1995), Electricity Generation and Transmission: A Case Study of Problematic EIA Implementation in the UK, *Environmental Policy and Practice*, Vol. 5 (1), pp 17–25.
[21] *Supra* notes 14, 15 and 16.
[22] Commission of the EC (1996), Proposal for a Council Directive on the assessment of the effects of certain plans and programmes on the environment, COM(96) 511 final, 4.12.96.
[23] *Supra* notes 4, 5 and 8.
[24] *Supra* note 4.
[25] *Supra* note 22.
[26] The UK has traditionally been hostile to the idea of formal SEA legislation from the EC, though is quite content to encourage a voluntary form of SEA in the form of environmental appraisal of (land use) development plans and eventually of Regional Planning Guidance. Whether the change of Government in May 1997 will bring about a change in attitude to SEA must be awaited, although the Labour Party has made a number of commitments in this field in its policy document "In Trust for Tomorrow" (1994) pp. 44, 46.
[27] National Environmental Policy Act (NEPA) (1969).

Appendix 9

SHEATE, W. R. (2003a), The EC Directive on Strategic Environmental Assessment: A Much-Needed Boost for Environmental Integration, *European Environmental Law Review*, Vol. 12 (12):331-347.

The EC Directive on Strategic Environmental Assessment: A Much-Needed Boost for Environmental Integration

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Summary: Environmental assessment has long been held to be a key tool in achieving one of the cornerstones of European Community environmental policy, that of environmental integration. However, it has taken the best part of 30 years to get to the point of implementation of the Strategic Environmental Assessment (SEA) Directive, due in 2004. Securing legislation for environmental assessment at strategic decision levels as well as project level EIA has been a symbolic milestone for environmentalists. This paper explores the background to the SEA Directive and analyses in detail its key requirements and implications for implementation. The paper also examines the relationship between the SEA Directive and the changing policy context over the period of its long gestation. It concludes that the SEA Directive has arrived at an opportune time to reinvigorate the environmental integration agenda, currently beleaguered by the much stronger social and economic agenda dominant in current EU conceptions of sustainable development. While there has been positive formalisation and strengthening of EU environmental policy over the past 30 years, arguably there has been inadequate real change in terms of the effective integration of the environment into decision-making on the ground.

I. Introduction

The SEA Directive (2001/42/EC)[1] was agreed by EU Member States in June 2001 and is due to come into force on 21 July 2004. The EU's Fifth Environmental Action Programme ("Towards Sustainability")[2] provides a rationale for the SEA Directive stating (Part I-Section 7.3):

> Given the role of achieving sustainable development, it seems only logical, if not essential, to apply an assessment of the environmental implications of all relevant policies, plans and programmes.

While the SEA Directive, as finally agreed, applies only to plans and programmes (that set the context for development projects), it is already bringing greater attention to higher policy level decision-making, since decisions made at this level are likely to be increasingly exposed as EIA/SEA moves up the decision-making tiers.[3] Policy making was deemed too difficult politically to address at the same time as plans and programmes.While the main development of the SEA Directive occurred primarily over the last ten years, its origins lie somewhat earlier in the original debates in the mid-1970s on legislating for environmental impact assessment (EIA). Indeed, the SEA Directive cannot, nor should it, be considered in isolation from the EIA Directive 85/337/EEC.[4] The EIA Directive was intended to establish procedures for requiring EIA of certain public and private projects. This position had not been arrived at without considerable controversy, not least over whether project-level assessment was really the best place to start on an EIA initiative, or whether plans and programmes would not have been a more effective and appropriate level for Community-wide action.

The European Commission was at pains to secure a firm legal foothold for the EIA Directive since it was seen as the cornerstone of the Third Action Programme, and because it was intent on avoiding the weight of litigation experienced in the United States. It was felt that development at the project level had a more direct impact in terms of distortion of competition than did plans and programmes and therefore more readily justified under the Treaty of Rome.[5] There were, of course, other reasons why plans and programmes were not included. At the time there was little methodological expertise in assessing plans and programmes (though that was also to some extent true of projects) and the procedures for formulating plans and programmes were seen as being too disparate across Member States. However, this is not necessarily a good reason for failing to press ahead with legislation;[6] it is often legislation that leads to the development of appropriate methodologies rather than the other way around. This was certainly true for the EIA Directive, and in the early 1990s local authorities in the UK

[1] OJ 21.7.2001 L197/30, Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (the 'SEA Directive'), also available at http://europa.eu.int/comm/environment/eia/sea-legalcontext.htm#adopt.

[2] 5th Environmental Action Programme1993-2000 OJ 17.5.93 C138.

[3] Sheate, W.R, Dagg, S, Richardson, J, Aschemann, R, Palerm, J and Steen, U 'Integrating the Environment into Strategic Decision-Making: Conceptualizing Policy SEA' (2003) *European Environment*, 13 (1), 1-18.

[4] Council Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, OJ 05.7.1985 L175/ 40.

[5] Stuffman, C. (1979), Minutes of evidence taken before the European Communities Committee (UK House of Lords, Sub-Committee G, Environment), 23.1.79, evidence heard in private.

[6] G. Wandesforde-Smith 'Environmental Impact Assessment in the European Community' (Pre-print to publication (in 1979) in *Zeitschrift für Umweltpolitik*, 1978).

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were left to work out how to implement environmental appraisal of development plans.[7]

In many ways it has been a tortuous path to the SEA Directive, but there are a number of reasons why environmentalists can feel vindicated that securing the SEA Directive was a noble, if winding, path to tread. And, as we shall see, it has been environmentalists, with the European Commission and European Parliament, that have been in the vanguard of pushing this legislation along,[8] and through challenges in the courts over inadequacies arising from having an EIA Directive without SEA (especially the fact that the assessment was coming too late in the decision-making process, after key decisions have already been taken).[9] Many Member States, in contrast, have been dragged more or less reluctantly to recognize its importance, and its lengthy gestation is due to political rather than substantive practical or methodological reasons. While the context for SEA has changed over 30 years, from environmental protection to environmental integration to sustainable development, in many ways SEA is as necessary as it ever was, if not more so. That contextual change has not been a linear, progressive one. Indeed, it might be viewed more as "coming full circle" in returning to the days when strong environmental protection measures were being challenged by demands for economic growth. The SEA Directive has been a significant achievement for environmental integration, consistent with the ongoing "Cardiff process",[10] but needs to be seen against the backdrop of the recent dominance of the economic and social agendas of the Lisbon process.[11]

This paper analyses the Directive in some detail, first by a brief historical perspective of the development of the SEA Directive, which provides an important understanding of the driving forces underlying its development. A brief examination of the lengthy preamble then follows, which provides the policy and legislative context and justification for the Directive. Each article of the Directive is then tabulated against detailed annotation and commentary. Key issues that have emerged during the Directive's development and from the tabulated analysis are then discussed and implications of the SEA Directive for implementation and EU environmental policy considered.

II. The Development of the SEA Directive

Rather than having a separate SEA Directive, there is actually considerable logic in incorporating project EIA and SEA into the same body of legislation,[12,13] this was very much part of the original debates over the draft EIA Directive in the 1970s and 1980s. In environmental assessment practice there is a clear continuum and a tiered relationship between project EIA and SEA at progressively more strategic levels, from programmes (groups of projects) to plans and policies. Divorced from SEA, project EIA frequently serves only to appraise irreversible impacts, not to remove or reduce them from the start. Early SEA, however, is well placed to anticipate and, therefore, avoid environmental problems.[14]

In fact, it is not too difficult in drafting terms to link EIA and SEA by amending the EIA Directive,[15] and as examined

[7] Town and Country Planning (Development Plan) Regulations 1991, SI 1991 No 2794; and see UK Department of the Environment (1993) *Environmental Appraisal of Development Plans: A Good Practice Guide* (HMSO: London, 1993).

[8] For example, Council for the Protection of Rural England (CPRE) (1992), *'Mock' EC Directive on Environmental Assessment: Proposals for amending EC Directive 85/337/EEC* (CPRE: 1992); CPRE *Proposed Directive on Strategic Environmental Assessment: A Campaign Briefing Pack* (CPRE: 1997); Birdlife International, CPRE, EEB and T&E, *Comments by CPRE, EEB, Birdlife International and T&E to the Common Position on an Amended proposal for a Council Directive on the assessment of the effects of certain plans and programmes on the environment* (2000); EEB/CPRE *Recommendations for Second Reading of the Council Divertive on the Assessment of the effects of certain plans and programmes on the environment: EEB Comments on the report of the European Parliament Committee on the Environment, Public Health and Consumer Protection* (2000).

[9] See for example, Case C392/92 *Bund Naturshutz and others v Bavarian Higher Regional Court* [1994] ECR I-3717.

[10] At the Heads of Government Cardiff Summit in June 1998 the EU committed itself to the integration of the environment into all EU policies (Commission of the European Communities (1998), *Partnership for Integration A Strategy for integrating the Environment into European Union Policies*, COM (98) 333). The Cardiff Summit set off a process of developing strategies for environmental integration for the various formations of the Council of Ministers. This was followed up by the Vienna Summit in December 1998, the 'Best Practices' workshop held in Bonn in 1999 (Commission of the European Communities (1999), Conclusions of the German Presidency of the EC Council of Ministers on the International Workshop on "Best Practices for Integration of Environmental Protection Requirements into Other Policies", Bonn, 25&26 May 1999), and the meetings of the European Council in Cologne in June 1999, Helsinki in 2000 and Göteborg in June 2001. It had been hoped at Helsinki that the Göteborg Summit would result in the conclusion to the process (Fergusson M, Coffey, C, Wilkinson, D, Baldock, D, Farmer, A, Kraemer, R A and Mazurek, A-G *The Effectiveness of EU Council Integration Strategies and Options for Carrying Forward the 'Cardiff' Process* (IEEP/Ecologic: 2001)). However, Göteborg concluded that section strategies should be finalised and further developed and implemented as soon as possible and reported at the Spring European Council in 2002. The Cardiff process was also given a wider dimension within the framework of the Sustainable Development Strategy, which was also adopted at Göteborg in June 2001 (European Council (2001), Göteborg Presidency Conclusions 15 and 16 June 2001). This included adding in the environmental pillar to the Lisbon process of social and economic reforms. The EU's Sustainable Development Strategy was set to be reviewed regularly at the annual Spring Environment Council meeting.

[11] The 'Lisbon process' was agreed at the European Council held in Lisbon in 2000 and aims for the EU "to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable growth with more and better jobs and greater social cohesion" (European Council (2000) Lisbon Presidency Conclusions 23 and 24 March 2000).

[12] Cerny, R. J and Sheate, W.R 'Strategic Environmental Assessment: Amending the EA Directive' (1992) *Environmental Policy and Law*, 22/3:154-159.

[13] Sheate, W.R. *Making an Impact: A Guide to EIA Law and Policy* (Cameron May: London, 1994)

[14] Above n. 12.

[15] See for example CPRE *'Mock' EC Directive on Environmental Assessment*, above n. 8.

later in this paper, there are many very close similarities between the two Directives that could be strengthened by one piece of consolidated legislation. However, politically, this was seen as too great a leap to be achieved at once, and the Commission was at pains to keep the draft SEA Directive completely separate from amendments to the project EIA Directive during the 1990s.[16] The SEA Directive has, then, had almost as tortuous a history as the EIA Directive: early drafts, applying to policies, plans and programmes, were under discussion within the Commission in 1990 and 1991 only to be abandoned at the Edinburgh Summit at the end of 1992 due to a UK veto.[17] The Commission resurrected the idea a couple of years later and consulted publicly on a draft in the summer of 1995, though by that time any reference to policies had been removed, with the proposed Directive applying only to plans and programmes. This was redrafted yet again in early 1996 and the Commission secured internal agreement on the new version at the end of 1996 (COM (96) 511 final)[18,19]

This proposal sat rather at odds with the spirit of earlier drafts, since it was not only restricted to plans and programmes, but rather more obscurely to 'town and country planning' plans and programmes. This resulted in a very narrow definition of plans and programmes, and some degree of confusion since town and country planning has a very specific legislative context in the UK which is not necessarily the same as land use and spatial planning elsewhere in the European Union. This may have been an attempt to appease the UK, which had continued to object to a formal SEA Directive even while encouraging the development of environmental appraisal of local authority development plans.[20] It was also the only version that was able to secure agreement across the whole of the European Commission. If the SEA Directive had applied only to "town and country" plans and programmes, it would have resulted in little impact upon UK practices. If this was the reason, it was unsuccessful since the (then Conservative) UK Government continued to object to the European Union imposing legislation on environmental assessment at more strategic decision levels.

The proposal came before the European Parliament for its first reading in October 1998.[21] This resulted in a number of significant amendments which, after consideration by the Commission, resulted in an amended proposal for an SEA Directive (COM (99) 73 final).[22] The most significant changes occurred to Art. 2, though these were also reflected elsewhere in the proposals, e.g. in the preamble recitals, as was the explicit inclusion of sustainable development (Art. 1). Amendments to Art. 2 placed town and country planning plans and programmes simply as one of many categories, rather than as the defining criterion for determining which plans and programmes would be affected. Transport plans and programmes, for example, were clearly identified. The Commission also commissioned a number of reports on SEA in practice and held a number of workshops on the subject[23] as a means to advance debate.

By December 1999 the Environment Ministers of the 15 Member States had reached a political agreement on a common text for the future Directive (the Common Position). The Common Position was formally adopted on 30 March 2000. As co-legislator, the European Parliament approved the Common Position on 6 September 2000 subject to the amendments voted at its plenary session (Second Reading).[24] The Commission published its opinion on the amendments to the Common Position voted by the European Parliament on 16 October 2000.[25] It was able to accept a number of the Parliament's amendments in principle, but not others. Significant differences between the Council and Parliament resulted in the draft Directive going to the Conciliation Committee during early 2001. For example, there were attempts by German Christian Democrat MEPs to weaken the requirement for tiering of SEA at different decision making levels, and differing views between the Council, Commission and European Parliament as to whether future Structural Funds were covered by the Directive (see below).

III. The SEA Directive – Legal Basis

The legal basis for the SEA Directive was far more secure in 2001 than that for the EIA Directive in 1985, which had to be justified under the approximation of laws as part of the completion of the single market under the Treaty of Rome, as pertaining to the European *Economic* Community at the time. The first recital of the Preamble to the SEA Directive refers to Art. 174 (environmental protection) and Art. 6 of the Treaty (environmental integration and sustainable development) as the legal basis on which the Directive is set out:

[16] Council Directive 97/11/EC amending Council Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment OJ 14.03.1997 L73/5.

[17] Above n. 12.

[18] Commission of the European Communities (1996), *Proposal for a Council Directive on the assessment of certain plans and programmes on the environment,* COM (96) 511 final, 4 December 1996.

[19] Von Seht, H. and Wood, C. 'The Proposed European Directive on Environmental Assessment: Evolution and Evaluation' (1998) *Environmental Policy and Law*, 28 (5), 242-250.

[20] UK Department of the Environment *Environmental Appraisal of Development Plans: A Good Practice Guide* (HMSO: London, 1993).

[21] EP Minutes of 20/10/98, A4-0245/98

[22] Commission of the European Communities (1998a), *Amended Proposal for a Council Directive on the assessment of certain plans and programmes on the environment,* COM (99) 73 final, December 1998.

[23] Commission of the European Communities (1998b), Strategic Environmental Assessment: Report of the Workshop, Semmering, Austria, 5-7 October 1998; Commission of the European Communities (1998c), Strategic Environmental Assessment (SEA) in Europe, 4th European Workshop on Environmental Impact Assessment, DGXI; see also European Commission DG Environment web site for further information on the range of SEA studies, at <http://europa.eu.int/comm/environment/eia/sea-support.htm>.

[24] European Parliament, Opinion of 6 September 2000, Verbatim Report of Proceedings, Second Reading A5-0196/2000, available at http://www3.europarl.eu.int/omk/omnsapir.so/debatsL5?FILE–20000906EN&LANGUE–EN&LEVEL–TOC1, accessed 3 November 2003.

[25] COM (2000) 636 final.

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Whereas:

(1) Article 174 of the Treaty provides that Community policy on the environment is to contribute to, inter alia, the preservation, protection and improvement of the quality of the environment, the protection of human health and the prudent and rational utilisation of natural resources and that it is to be based on the precautionary principle. Article 6 of the Treaty provides that environmental protection requirements are to be integrated into the definition of Community policies and activities, in particular with a view to promoting sustainable development.

The Directive cites Art. 175(1) as the Article that enables the Council and European Parliament to take action to achieve the objectives set out in Art. 174. The legislative procedure for Art. 175(1) is co-decision with qualified majority voting. The co-decision procedure applies to all actions taken in pursuit of the Art. 174 objectives, unless one of the derogations in Art. 175(2) applies, in which case the legislative procedure is co-operation with unanimous voting. The derogations in Art. 175(2) include:

- "provisions primarily of a fiscal nature" and
- "measures concerning town and country planning, land use with the exception of waste management and measures of a general nature, and management of water resources".

There was some dispute over whether Art. 175(2) should have been cited instead, but SEA, for example, of Structural Funds would not constitute a provision primarily of a fiscal nature, and SEA relates to sectors well beyond just town and country planning.[26]

Historically, environmental assessment has been a key tool through which the EC has sought to achieve its key environmental policy principle, that of environmental integration, and has featured in some shape or form throughout its Environment Action Programmes.[27] The second recital of the preamble cites the Fifth Environment Action Programme in support of the Directive:

(2) The Fifth Environment Action Programme: Towards sustainability – A European Community programme of policy and action in relation to the environment and sustainable development,[28] supplemented by Decision No 2179/98/EC[29] on its review, affirms the importance of assessing the likely environmental effects of plans and programmes.

Further international justification is provided by reference to the Convention on Biological Diversity (CBD) in the third recital:

(3) The Convention on Biological Diversity requires Parties to integrate as far as possible and as appropriate the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans and programmes.

The CBD at Art. 14(b) stresses the importance of applying appropriate environmental assessment processes for programmes and polices to ensure that likely significant effects on biodiversity are taken into account.[30]

Recitals 4–6 of the preamble highlight the importance of environmental assessment for integrating the environment into plans and programmes, and that SEA will provide a more consistent framework in which to operate. It also emphasises the need for common procedural requirements in all Member States in order to achieve a high level of environmental protection. Recital 7 refers to the Espoo Convention on Environmental Impact Assessment in a Transboundary Context of February 25 1991 and the (as then) proposed SEA protocol, and the need for adequate transboundary consultations over plans and programmes likely to have significant effects.

Recitals 8–9 stress the importance of subsidiarity (recital 8) in laying down a minimum environmental assessment framework that sets out broad principles and leaves the detail to Member States as to whether its requirements should be integrated into existing procedures or specific procedures should be established. Given assessment is to take place at different levels, duplication should be avoided. Recital 10 outlines the relationship of the SEA Directive to other legislation, specifically all plans and programmes which set the framework for future development consents of projects under the EIA Directive 85/337/EEC,[31] and plans and programmes under the Habitats Directive 92/43/EC.[32] Where the area affected is small or only a minor modification is proposed, it is left to Member States to decide if such actions are likely to have significant effects.

Recitals 11–19 summarise the SEA process and make provision (Recital 19) for joint procedures between the Birds Directive 79/409/EEC[33] or the Water Framework Directive 2000/60/EC.[34] Recital 20 requires a first report on the application and effectiveness of the Directive be carried out by the Commission five years after its entry into force, and subsequently at seven-year intervals.

IV. The SEA Directive – Detailed Analysis

The SEA Directive defines "environmental assessment" (and therefore SEA) for the purposes of the Directive in procedural terms in Art. 2:

"environmental assessment" shall mean the preparation of an environmental report, the carrying out of consultations,

[26] Birdlife International *Justification for the legal basis of the Directive on the Assessment of the Effects of Certain Plans and Programmes on the Environment (the SEA Directive)* (Birdlife International Briefing Document: 2001).

[27] Sheate, W.R. 'Environmental Integration and Sustainable Development in the EU: Changing Conceptions and Potential for Conflict in Environmental Assessment' (2003) *Environmental Policy and Law*, 33 (5): 222-233.

[28] 5th Environmental Action Programme1993-2000 OJ 17.5.93 C138/5.

[29] OJ 10.10.1998 L275/1.

[30] Byron, H. *Biodiversity and Environmental Impact Assessment: A Good Practice Guide for Road Schemes* (The RSPB, WWF-UK, English Nature and the Wildlife Trusts: Sandy, 2000).6.

[31] OJ 5.7.1985 L175/40, as amended by Directive 97/11/EC (OJ 14.3.1997 L73/5).

[32] OJ 22.7.1992 L206/7. Directive as last amended by Directive 97/62/EC (OJ 8.11.1997 L305/42).

[33] OJ 25.4.1979 L103/1., as last amended by Directive 97/49/EC (OJ 13.8.1997 L223/9).

[34] OJ 22.12.2000 L327/1.

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the taking into account of the environmental report and the results of the consultations in decision-making and the provision of information on the decision in accordance with Articles 4 to 9;

Other than not relating to policies, this definition in conjunction with Arts 4 to 9, would appear to compare quite favourably with a comprehensive definition of SEA[35] that combines the essential parts of two well-known definitions,[36,37]

SEA is a systematic, decision aiding procedure for evaluating the likely significant environmental effects of options throughout the policy plan or programme development process, beginning at the earliest opportunity, including a written report and the involvement of the public throughout the process.

The key elements of a report and public involvement and their role in informing the decision-making process are included. The extent to which the SEA Directive, when implemented, will meet best practice in SEA remains to be seen, and inevitably there are likely to be significant variations among Member States.

Table 1 below sets out the full text of the Articles and Annexes of the SEA Directive (excluding the preamble). Against each Article are provided annotations highlighting significant relationships with the EIA Directive, and providing commentary on the origins and implications of the specific text. In this way key issues are identified and highlighted for subsequent discussion.

[35] Above n. 3 at p. 4.

[36] Therivel, R., Wilson, E., Thompson, S., Heaney, D. and Pritchard, D. *Strategic Environmental Assessment* (Earthscan: London, 1992).

[37] Sadler, B. and Verheem, R. *Strategic Environmental Assessment: Status, Challenges and Future Directions* (Ministry of Housing, Spatial Planning and the Environment of the Netherlands: 1996).

Table 1: Annotated Text of the SEA Directive 2001/42/EC

Text of Articles (*OJ L 197, 21.7.2001, p.30-37*)	**Relationship to EIA Directive 85/337/EEC as amended by 97/11/EC**	**Commentary**
Article 1 – Objectives The objective of this Directive is to provide for a high level of protection of the environment [i] and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development [ii], by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment.	This compares with Art. 2 of the EIA Directive: "1. Member States shall adopt all measures necessary to ensure that, before consent is given, projects likely to have significant effects on the environment by virtue, *inter alia*, of their nature, size or location are made subject to a requirement for development consent and an assessment with regard to their effects. . ."	**i** High level of protection (see **V.** below on **Scope of Application** (*Set the framework*) **ii** Environmental integration defined as in Art. 6 of the Amsterdam consolidated Treaty, in association with promoting sustainable development see **V. Environmental Integration** below.
Article 2 – Definitions For the purposes of this Directive: (a) "plans and programmes" shall mean plans and programmes [iii], including those co-financed by the European Community, [iv] as well as any modifications to them: – which are subject to preparation and/or adoption by an authority at national, regional or local level or which are prepared by an authority for adoption, through a legislative procedure by Parliament or Government, and which are required by legislative, regulatory or administrative provisions; [v] (b) "environmental assessment" shall mean the preparation of an environmental report [vi] the carrying out of consultations, the taking into account of the environmental report and the results of the consultations in decision-making and the provision of information on the decision in accordance with Articles 4 to 9; (c) "environmental report" shall mean the part of the plan or programme documentation containing the information required in Article 5 and Annex I; (d) "The public" shall mean one or more natural or legal persons and, in accordance with national legislation or practice, their associations, organisations or groups. [vii]	**vi** (b) (c) Unlike the EIA Directive the production of an environmental report is explicit the EIA Directive refers instead to the ":information to be provided" [Art. 5 (3), 85/337/EEC] see **V. Environmental Report** below. **vii** (d) The "public concerned" is not defined in the EIA Directive [Art. 6].	**iii** Not policies dropped by COM (96) 511 final, after early attempts to include policies in the early 1990s see **V. Scope of application** below. **iv** Structural Funds addressed during conciliation January 2001 (by Birdlife, CPRE, EEB) see **V. Scope of application** below. **v** Administrative provisions are important as spreads net wider, and has given rise to debate over which plans are subject to SEA.

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Article 3 – Scope

1. An environmental assessment, in accordance with Articles 4 to 9, shall be carried out for plans and programmes referred to in paragraphs 2 to 4 which are likely to have significant environmental effects. [viii]

2. Subject to paragraph 3, an environmental assessment shall be carried out for all plans and programmes,

(a) which are prepared for agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use and which set the framework for future development consent of projects listed in Annexes I and II to Directive 85/337/EEC, [ix] or

(b) which, in view of the likely effect on sites, have been determined to [x] require an assessment pursuant to Article 6 or 7 of Directive 92/43/EEC.

3. Plans and programmes referred to in paragraph 2 which determine the use of small areas at local level and minor modifications to plans and programmes referred to in paragraph 2 shall require an environmental assessment only where the Member States determine that they are likely to have significant environmental effects. [xi]

4. Member States shall determine whether plans and programmes, other than those referred to in paragraph 2, which set the framework for future development consent of projects, are likely to have significant environmental effects. [xii]

5. Member States shall determine whether plans or programmes referred to in paragraphs 3 and 4 are likely to have significant environmental effects either through case-by-case examination or by specifying types of plans and programmes or by combining both approaches. [xiii] For this purpose Member States shall in all cases take into account relevant criteria set out in Annex II, in order to ensure that plans and programmes with likely significant effects on the environment are covered by this Directive.

6. In the case-by-case examination and in specifying types of plans and programmes in accordance with paragraph 5, the authorities referred to in Article 6(3) shall be consulted. [xiv]

7. Member States shall ensure that their conclusions pursuant to paragraph 5, including the reasons for not requiring an environmental assessment pursuant to Articles 4 to 9, are made available to the public. [xv]

8. The following plans and programmes are not subject to this Directive:

plans and programmes the sole purpose of which is to serve national defence or civil emergency,

financial or budget plans and programmes.

9. This Directive does not apply to plans and programmes co-financed under the current respective programming periods* for Council Regulations (EC) No 1260/992** and No 1257/993***. [xvi]

* The 2000-2006 programming period for Council Regulation (EC) No 1260/99 and the 2000-2006 and 2000-2007 programming periods for Council Regulation (EC) No 1257/99.

** Council Regulation (EC) No 1260/99 of 21 June 1999 laying down general provisions on the Structural Funds. (OJ L 161, 26.6.1999, p. 1.)

*** Council Regulation (EC) No 1257/99 of 17 May 1999 on support for rural development from the European Agricultural Guidance and Guarantee Fund (EAGGF) and amending and repealing certain regulations. (OJ L 160, 26.6.1999, p. 80.)

Article 4 – General obligations

1. The environmental assessment referred to in Article 3 shall be carried out during the preparation of a plan or programme and before its adoption or submission to the legislative procedure. [xvii]

2. The requirements of this Directive shall either be integrated into existing procedures in Member States for the adoption of plans and programmes or incorporated in procedures established to comply with this Directive.

viii The SEA Directive makes no reference to direct and indirect effects, unlike Art. 3 of the EIA Directive:
"The environmental impact assessment shall identify, describe and assess, in an appropriate manner,. . ..the **direct and indirect** effects of a project on the following factors. . . . . ."- **see V. Environmental report** below.

xi 3. Similar to Annex II category of the EIA Directive, but potentially has more far reaching effects see **V. Scope of application** *(Screening)* below.

xii 4. No such catch-all category exists in the EIA Directive (though has been proposed in the past, e.g. CPRE, 1992). The lack of such a category has, in the past, led to an inability to require EIA in the UK wind farms, golf courses, trout farms ("salmonids")).

xiii 5.Screening similar approach to EIA Directive, and has learnt from the lessons of the EIA Directive (Art. 4).

ix 2. Much debate and change over the course of the proposal. Exactly what is meant by "set the framework for. . ." is still unclear see **V. Scope of application** below.

x "have been determined to" Birdlife International tried to get this phrase deleted after the Common Position (April 2000), since under the Habitats Directive such an assessment is required for any plan or programmes likely to have a significant effect on a protected site. There is no qualification for such an effect "to have been determined".

xii 4. This is a catch-all category i.e. allows extension to plans and programmes not listed see **V. Scope of application** *(Screening)* below.

xiii 5. Belt & braces approach to ensure that primary objective of subjecting plans and programmes likely to have significant effects to SEA is met, and whole classes of PPs having significant effects are not excluded (achieved as a result of proposals by Birdlife International, January 2001) see **V. Scope of application** *(Screening)* below.

xiv 6. Environmental authorities given significant role, but not the public, as lobbied for by NGOs **see V. Public consultation** below.

xv 7. Reasons for not requiring SEA secured by NGOs e.g. Birdlife, April 2000 after Common Position.

xvi 9. NGO action secured the possible application of the Directive to future Structural Fund rounds see **V. Scope of application** (*Structural Funds*) below.

xvii "during" is significant as it relates to Art. 6 below on consultation. As the assessment must take place during the preparation of the plan or programme, so must public consultation **see V. Public consultation** below.

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3. Where plans and programmes form part of a hierarchy, Member States shall, with a view to avoiding duplication of the assessment, take into account the fact that the assessment will be carried out, in accordance with this Directive, at different levels of the hierarchy. For the purpose of, *inter alia*, avoiding duplication of assessment, Member States shall apply Article 5(2) and (3). [xviii]

Article 5 – Environmental report [xix]

1. Where an environmental assessment is required under Article 3(1), an environmental report shall be prepared in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives [xx] taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated. The information to be given for this purpose is referred to in Annex I.
2. The environmental report prepared pursuant to paragraph 1 shall include the information that may reasonably be required taking into account current knowledge and methods of assessment, the contents and level of detail in the plan or programme, its stage in the decision-making process and the extent to which certain matters are more appropriately assessed at different levels in that process in order to avoid duplication of the assessment. [xxi]
3. Relevant information available on environmental effects of the plans and programmes and obtained at other levels of decision-making or through other Community legislation may be used for providing the information referred to in Annex I. [xxii]
4. The authorities referred to in Article 6(3) shall be consulted when deciding on the scope and level of detail of the information which must be included in the environmental report. [xxiii]

Article 6 – Consultations

1. The draft plan or programme and the environmental report prepared in accordance with Article 5 shall be made available to the authorities referred to in paragraph 3 of this Article and the public.
2. The authorities referred to in paragraph 3 and the public referred to in paragraph 4 shall be given an early and effective opportunity [xxiv] within appropriate time frames to express their opinion on the draft plan or programme and the accompanying environmental report before the adoption of the plan or programme or its submission to the legislative procedure.
3. Member States shall designate the authorities to be consulted which, by reason of their specific environmental responsibilities, are likely to be concerned by the environmental effects of implementing plans and programmes.
4. Member States shall identify the public for the purposes of paragraph 2, including the public affected or likely to be affected by, or having an interest in, the decision-making subject to this Directive, including relevant non-governmental organisations, such as those promoting environmental protection and other organisations concerned. [xxv]
5. The detailed arrangements for the information and consultation of the authorities and the public shall be determined by the Member States.

Article 7 – Transboundary consultations

1. Where a Member State considers that the implementation of a plan or programme being prepared in relation to its territory is likely to have significant effects on the environment in another Member State, or where a Member State likely to be significantly affected so requests, the Member State in whose territory the plan or programme is being prepared shall, before its adoption or submission to the legislative procedure, forward a copy of the draft plan or programme and the relevant environmental report to the other Member State. [xxvi]

xviii 3. Tiering also relates to EIA Directive, i.e. tiering between plans, programmes and projects.

xix Unlike the EIA Directive the production of an environmental report is explicit (see note **vi** above).

xx Alternatives more explicitly and stronger than required in the EIA Directive, and requires reasonable alternatives to be considered see **V. Environmental report** below.

xxiii 4. Scoping still only optional in EIA Directive.

xxiv Unlike the EIA Directive, this emphasizes "early" consultation in (2), as assessment process is "during" plan preparation, consultation in PP could be akin to consultation during scoping, baseline gathering, and identification and assessment stages.

xxvii Provisions very similar to those implementing Espoo for the EIA Directive.

xviii 3. Tiering debate during development of Directive on this as German Christian Democrats sought to defeat the whole concept of tiering by having only one assessment **see V. Tiering** below.

xxi 2. Wording in first part is similar to EIA Directive, except then refers to tiering, i.e. appropriate level of detail for the level of decision-making.

xxii 3. this cross referencing of decision levels reinforces tiering

xxiii 4. Formal mandatory scoping, but not including the public (as sought by NGOs) **see V. Scoping** below.

xxv The public is defined quite widely and explicitly, not just those affected, but also those having an interest in, and NGOs **see V. Public consultation** below.

xxvi Implements requirements of the SEA Protocol to the Espoo convention on transboundary impacts.
See V. Espoo and SEA Protocol below.

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2. Where a Member State is sent a copy of a draft plan or programme and an environmental report under paragraph 1, it shall indicate to the other Member State whether it wishes to enter into consultations before the adoption of the plan or programme or its submission to the legislative procedure and, if it so indicates, the Member States concerned shall enter into consultations concerning the likely transboundary environmental effects of implementing the plan or programme and the measures envisaged to reduce or eliminate such effects. Where such consultations take place, the Member States concerned shall agree on detailed arrangements to ensure that the authorities referred to in Article 6(3) and the public referred to in Article 6(4) in the Member State likely to be significantly affected are informed and given an opportunity to forward their opinion within a reasonable time-frame. [xxvii]
3. Where Member States are required under this Article to enter into consultations, they shall agree, at the beginning of such consultations, on a reasonable time-frame for the duration of the consultations.

Article 8 – Decision making

The environmental report prepared pursuant to Article 5, the opinions expressed pursuant to Article 6 and the results of any transboundary consultations entered into pursuant to Article 7 shall be taken into account during the preparation of the plan or programme [xxviii] and before its adoption or submission to the legislative procedure.

"**xxviii** Taking into account" requirement is similar to the EIA Directive, but its effect is very different because it occurs before the "decision-making process". The equivalent in EIA would be to take into account consultations and the assessment during the preparation of the environmental impact statement, i.e. by the developer, before the application and EIS is submitted

xxviii "Taking into account" during the preparation of the plan, before adoption, provides for earlier public influence on the planning process than in the EIA Directive.

Article 9 – Information on the decision

1. Member States shall ensure that, when a plan or programme is adopted, the authorities referred to in Article 6(3), the public and any Member State consulted under Article 7 are informed and the following items are made available to those so informed:
(a) the plan or programme as adopted,
(b) a statement summarising how environmental considerations have been integrated [xxix] into the plan or programme and how the environmental report prepared pursuant to Article 5, the opinions expressed pursuant to Article 6 and the results of consultations entered into pursuant to Article 7 have been taken into account in accordance with Article 8 and the reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with [xxx], and
(c) the measures decided concerning monitoring [xxxi] in accordance with Article 10.
2. The detailed arrangements concerning the information referred to in paragraph 1 shall be determined by the Member States.

xxix (b) this implies more than just environmental considerations being taken into account; they should be fully integrated into the plan or programme.

xxx Reasons for decision provision is stronger than the EIA Directive requirement? **See V. Reasons for decision** below.

xxx (c) No monitoring in EIA

xxxi (c) reinforces monitoring requirement in Art. 10.

Article 10 – Monitoring

1. Member States shall monitor the significant environmental effects of the implementation of plans and programmes in order, inter alia, to identify at an early stage unforeseen adverse effects, and to be able to undertake appropriate remedial action. [xxxii]
2. In order to comply with paragraph 1, existing monitoring arrangements may be used if appropriate, with a view to avoiding duplication of monitoring.

xxxii No monitoring in EIA Directive strongly resisted during 97/11/EC development. Latest 5 year review report 2003 recommends introducing a post-decision monitoring system as a tool for improving quality control. (see V. Monitoring below). Little justification now for not having it in EIA (though applies to developer, cf. authorities for SEA)

xxxii Monitoring with a clear purpose to be able to act to remedy problems. However, monitoring is only of the significant environmental effects of implementation of the plan/ programme and is potentially restrictive.
(2) This requires a new process if not available already important link to tiering though not mentioned as such, i.e. tiered plans provide a means of and reason for monitoring.

See V. Monitoring below.

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Article 11 – Relationship with other Community legislation

1. An environmental assessment carried out under this Directive shall be without prejudice to any requirements under Directive 85/337/EEC and to any other Community law requirements.[xxxiii]

2. For plans and programmes for which the obligation to carry out assessments of the effects on the environment arises simultaneously from this Directive and other Community legislation, Member States may provide for coordinated or joint procedures fulfilling the requirements of the relevant Community legislation in order, *inter alia*, to avoid duplication of assessment.

3. For plans and programmes co-financed by the European Community, the environmental assessment in accordance with this Directive shall be carried out in conformity with the specific provisions in relevant Community legislation.

xxxiii 1. Proposed amendments by Christian Democrat MEPs could have prejudiced 85/337/EEC **see V. Tiering** below

Article 12 – Information, reporting and review

1. Member States and the Commission shall exchange information on the experience gained in applying this Directive.

2. Member States shall ensure that environmental reports are of a sufficient quality [xxxiv] to meet the requirements of this Directive and shall communicate to the Commission any measures they take concerning the quality of these reports.

3. Before 21 July 2006 the Commission shall send a first report on the application and effectiveness of this Directive to the European Parliament and to the Council. With a view further to integrating environmental protection requirements, in accordance with Article 6 of the Treaty, and taking into account the experience acquired in the application of this Directive in the Member States, such a report will be accompanied by proposals for amendment of this Directive, if appropriate. In particular, the Commission will consider the possibility of extending the scope of this Directive to other areas/sectors and other types of plans and programmes. A new evaluation report shall follow at seven-year intervals.

4. The Commission shall report on the relationship between this Directive and Regulations (EC) No 1260/1999 and No 1257/1999 well ahead of the expiry of the programming periods provided for in those Regulations, with a view to ensuring a coherent approach with regard to this Directive and subsequent Community Regulations.

xxxiv Not covered by EIA Directive as environmental report/EIS not explicit in EIA Directive. Poor quality control highlighted by recent five year report.

xxxiv Clear obligation to put in place procedures for ensuring quality control (again has potential links to tiering as subsequent tier provide means of monitoring and therefore auditing quality of previous stage) see **V. Environmental report**. below.

Strengthened after Common Position Birdlife April 2000.

Article 13 – Implementation of the Directive

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive before 21 July 2004. They shall forthwith inform the Commission thereof.

2. When Member States adopt the measures, they shall contain a reference to this Directive or shall be accompanied by such reference on the occasion of their official publication. The methods of making such reference shall be laid down by Member States.

3. The obligation referred to in Article 4(1) shall apply to the plans and programmes of which the first formal preparatory act is subsequent to the date referred to in paragraph 1. Plans and programmes of which the first formal preparatory act is before that date and which are adopted or submitted to the legislative procedure more than 24 months thereafter, shall be made subject to the obligation referred to in Article 4(1) unless Member States decide on a case by case basis that this is not feasible and inform the public of their decision. [xxxv]

4. Before 21 July 2004, Member States shall communicate to the Commission, in addition to the measures referred to in paragraph 1, separate information on the types of plans and programmes which, in accordance with Article 3, would be subject to an environmental assessment pursuant to this Directive. The Commission shall make this information available to the Member States. The information will be updated on a regular basis.

xxxv Transitional arrangements, to avoid "pipeline" problems:- Where adoption of a plan or programme that had been initiated before 21 July 2004 does not occur until after 21 July 2006, the Directive shall apply unless it is not feasible. **See V. Implementation** below.

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Article 14 – Entry into force

This Directive shall enter into force on the day of its publication in the Official Journal of the European Communities.

Article 15 – Addressees

This Directive is addressed to the Member States.

Done at Luxembourg, 21 June 2001

For the European Parliament	For the Council
The President	The President
N. FONTAINE	B. ROSENGREN

ANNEX I

Information referred to in Article 5(1)

The information to be provided under Article 5(1), subject to Article 5(2) and (3), is the following:	**Equivalent in EIA Directive (as amended) Annex IV?**	
(a) an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes;	✓	**xxxvi** Biodiversity reference pushed by Birdlife after Common Position.
(b) the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;	Zero option not explicit in EIA	**xxxvii** No reference to direct and indirect effects. While secondary, cumulative etc. effects are mentioned, it is curious that indirect effects are not. Birdlife tried to insert an amendment to include this, in October 1999 see **V. Environmental report** below.
(c) the environmental characteristics of areas likely to be significantly affected;	✓	
(d) any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC;	✓	
(e) the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation;	x	
(f) the likely significant effects on the environment, including on issues such as biodiversity [xxxvi], population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors;	✓ except **xxxvi**	
(g) the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;	✓	
(h) an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	✓	
(i) a description of the measures envisaged concerning monitoring in accordance with Article 10.	x	
(j) a non-technical summary of the information provided under the above headings.	✓	
§ these effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects. [xxxvii]	✓ except **xxxvii**, EIA includes "direct and indirect effects"	

ANNEX II

Criteria for determining the likely significance of effects referred to in Article 3(5)

1. The characteristics of plans and programmes, having regard, in particular, to [xxxviii]	**Equivalent in EIA Directive (as amended) Annex III?**	
the degree to which the plan or programme sets a framework for projects and other activities, either with regard to the location, nature, size and operating conditions or by allocating resources;	x	**xxxviii** Clearly characteristics of the plan or programme relate to different factors compared to EIA Directive. This paragraph reinforces the importance of tiering in particular see **V. Tiering** below.
the degree to which the plan or programme influences other plans and programmes including those in a hierarchy;	x	
the relevance of the plan or programme for the integration of environmental considerations in particular with a view to promoting sustainable development;	x	
environmental problems relevant to the plan or programme;		

the relevance of the plan or programme for the implementation of Community legislation on the environment (e.g. plans and programmes linked to waste-management or water protection).	x
2. Characteristics of the effects and of the area likely to be affected, having regard, in particular, to	
the probability, duration, frequency and reversibility of the effects;	✓
the cumulative nature of the effects;	✓
the transboundary nature of the effects;	✓
the risks to human health or the environment (e.g. due to accidents);	✓
the magnitude and spatial extent of the effects (geographical area and size of the population likely to be affected);	✓
the value and vulnerability of the area likely to be affected due to:	
• special natural characteristics or cultural heritage;	✓±
• exceeded environmental quality standards or limit values;	
• intensive land-use;	
the effects on areas or landscapes which have a recognised national, Community or international protection status.	✓

V. Discussion

Environmental Integration

There is widespread agreement in the European Union that the concept of integrating the environment into policy making is a key principle of moving towards sustainable development.[38] Since 1998 this principal of EU environmental policy making has been enshrined in the so-called "Cardiff Process",[39] representing what the Commission identifies as the start of the third of three "waves" of environmental integration since 1992.[40]

The European Union's Sustainable Development Strategy,[41] however, emphasises economic and social progress above environmental integration – it is the Lisbon process on economic and social reform[42] that headlines the strategy (and is also annexed) rather than the Cardiff Process on environmental integration. Remarkably, the entire strategy avoids use of the term "environmental integration". Moreover, it contains an essentially "weak" (very weak) interpretation of sustainable development:

> "Achieving this [sustainable development] *in practice requires that economic growth supports social progress and respects the environment, that social policy underpins economic performance, and that environmental policy is cost-effective.*"[43]

This theme of an essentially weak interpretation of sustainable development is further continued in the draft European Constitution[44, 45] which again has further elevated sustainable development, this time to being part of the Union's Objectives (Art. I-3), while environmental integration continues to be seen separately, in the same form as Art. 6 of the Amsterdam Treaty, now in Part III of the Draft Constitution – The Policies and Functioning of the Union – as Art. III-2:

> "Environmental protection requirements must be integrated into the definition and implementation of the Union policies and activities referred to in this Part, in particular with a view to promoting sustainable development."[46]

The adoption of the SEA Directive, therefore, emerging as it did out of a strong historical environmental integration philosophy, provides an important counterpoint to the continued weakening of the conception of sustainable development elsewhere in EU policy. Article 1 of the SEA Directive also emphasizes the importance of integrating the SEA process (the "environmental considerations") with the preparation as well as the adoption of plans and programmes, i.e. the plan and programme making process.

[38] Wilkinson, D (1998), Steps Towards Integrating the Environment into Other EU Policy Sectors, in O'Riordan, T and Voisey, H (eds.) (1998), *The Transition to Sustainability: The Politics of Agenda 21 in Europe*, Earthscan, London.

[39] Above n. 10.

[40] Commission of the European Communities (2003) at http://europa.eu.int/comm/environment/integration/integration_history.htm, accessed 18 May 2003. The first wave was 1992-1997 with the commitment to sustainable development, focused on the 1992 Rio de Janeiro Earth Summit and the Maastricht Treaty. The second wave was 1997-1998, with the strengthening of integration through the Amsterdam Treaty and the agreement at the Cardiff Summit in 1998 on the Commission's Communication to the European Council "Partnership for Integration", which began the so-called Cardiff process. The Cardiff process was the focus for the third wave from 1998-2001 and the build up to the Helsinki and Göteborg Summits and the publication of the EU's Sustainable Development Strategy.

[41] Commission of the European Communities (2001), Communication from the Commission COM (2001) 264 final, A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development, Brussels, 15.5.2001.

[42] Above n. 11.

[43] Above n. 41, p.2.

[44] European Convention, Draft Constitution Volumes I-II, CONV 724/03 and 725/03, The European Convention Secretariat, Brussels, 26/27 May 2003.

[45] Sheate (2003): above n. 27.

[46] The qualification "*... in particular with a view to promoting sustainable development*" arguably weakens environmental integration if the conception of sustainable development is weak, i.e. dominated by economic and social considerations. This phrase has also crept into Annex II of the SEA Directive as a potential qualification to the criterion of *"relevance of the plan or programme for the integration of environmental considerations ..."*.

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Scope of application

Policies:
The application of the SEA Directive to policies was dropped by the time the first formal draft was published as COM (96) 511 final. Earlier attempts to include policies in the early 1990s fell by the wayside as various Member States objected to what was seen as potential interference in the political process.[47] NGOs, that had been instrumental in promoting SEA at all levels in the early 1990s,[48] did not seek to reinstate policies in early campaigns on the proposal (COM (96) 511 final) because of the political risk that even a directive for plans and programmes might be lost under the prevailing de-regulation agenda of the mid-1990s.[49] They did attempt, unsuccessfully, to insert policies into future consideration under the five year review process. However, the logic of "tiering" (see below) recognized by the SEA Directive is that SEA should also be applied to policy level decisions. The European Commission, recognizing this, commissioned research during 2000–2001 into the application of SEA to the most strategic decision-making levels, including policies.[50] In practice, a variety of forms of SEA are already being applied at policy level in some Member States,[51] but without the consistency that would be ensured by EC legislation.

Set the framework:
There was considerable debate over the scope of application of the SEA Directive during its development. From only covering land use plans and programmes, to town and country planning, to any plans or programmes that set the framework for future development consent of projects listed in Annexes I and II to Directive 85/337/EEC. The challenge for Member States in implementing the Directive is to work out what plans and programmes come within the ambit of "set the framework for". It could be argued that this is very broad, and given the directive applies not just to legislative provisions, but also administrative measures, the Directive may be applicable to a range of non-statutory plans, programmes, and strategies, if it can be argued that they set the framework for subsequent projects. The European Commission's guidance on implementing the Directive[52] recognizes that the EIA Directive was seen by the ECJ in case C-72/95 *Kraaijeveld* to have wide scope and a broad purpose,[53] and suggests that a similar approach should be adopted by Member States for the SEA Directive.

An example from the UK might be the national and regional water resource strategies produced by the Environment Agency (for England and Wales), which set the policy context in which future project decisions will be taken, e.g. new reservoirs, water abstraction, and water transfer schemes, all of which will be subject to the EIA Directive. However, the Environment Agency is only a consultee in the development consent process for such projects. But it *is* the licensing authority for abstractions and discharges and has a duty to ensure adequate distribution of water resources. Water companies, therefore, are unlikely to come forward with water resource schemes that have no chance of licensing by the Environment Agency. Indeed, the Commission guidance (referring to case C-188/89 *Foster and others v British Gas*) suggests that privatized utility companies may also be required to undertake SEA where they undertake long-term planning, e.g. for water resources, where under non-privatised regimes such plans would be carried out by authorities.[54] By their nature water resource strategies could result in significant effects on the environment, e.g. by promoting groundwater abstraction or new reservoirs. So water resource strategies would appear to set the framework for future development consent of projects under the EIA Directive, albeit indirectly.[55] Indeed, that is the key purpose behind the strategies' development and forms of SEA have already been applied by the Agency.[56] The intention is to provide a strategic environmental context within which water company investment decisions come forward and therefore any applications for subsequent development projects. The Agency and the UK Government have yet to finalise the list of Agency strategies to which the SEA Directive is likely to apply. In Scotland, by contrast, the Scottish Executive has announced that it will require all public sector generated plans and programmes to be subjected to SEA.[57]

The relationship between different levels of plans, of course, introduces the concept of tiering (see below), though this would not appear to have to be a direct relationship, e.g. a water resource strategy might set the framework indirectly (in terms of water availability) for subsequent decisions on housing development.

Structural funds:
EIA and SEA have, in response to problems caused by the funding of damaging projects, been integrated in a limited

[47] Above n. 12.
[48] e.g. CPRE (1992), above n. 8.
[49] CPRE (1997), Birdlife International, CPRE, EEB and T&E (2000), above n. 8.
[50] Sheate, W.R., Dagg, S., Richardson, J., Aschemann, R., Palerm, J. and Steen, U. (2001). *SEA and Integration of the Environment into Strategic Decision-Making* (Volumes 1-3), Final Report to the European Commission, DG XI, Contract No. B4-3040/99/136634/MAR/B4, available at http://europa.eu.int/comm/environment/eia/sea-support.htm#int, Office for Official Publications of the European Communities, Luxembourg; Sheate, W.R, Dagg, S, Richardson, J, Aschemann, R, Palerm, J and Steen, U (2003), Integrating the Environment into Strategic Decision-Making: Conceptualizing Policy SEA, *European Environment*, 13 (1), 1-18.
[51] Sheate (2003): above n. 27.
[52] Commission of the European Communities, (2003), Implementation of Directive 2001/42/EC on the Assessment of the Effects of Certain Plans and Programmes on the Environment, DG Environment 23 September 2003, available at http://europa.eu.int/comm/environment/eia/030923_sea_guidance.pdf.
[53] Op. cit at para. 3.4.
[54] Op.cit at para 3.12.
[55] Op.cit at para 3.23: the Commission recognizes that 'setting the framework' may be indirect, e.g. the plan or programme contains criteria or conditions which guide the way the consenting authority decides an application for development consent (for projects under the EIA Directive), such as placing limits on the type or extent of activity.
[56] Environment Agency (2001), *Water Resources for the Future: A Strategy for England and Wales*, Environment Agency, Bristol.
[57] Scottish Executive (2003), Strategic Environmental Assessment, News Release SENW532/2003, 28 May 2003, available online at http://www.scotland.gov.uk/pages/news/2003/05/SENW532.aspx, accessed 15 October 2003.

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form into the EU Structural Funds process. Key case law[58] in the early 1990s concerning the lack of environmental sensitivity with which the first (1989-1993) tranche of Structural Funds had been deployed meant that the European Commission could no longer ignore the potential for Community funds to result in environmentally damaging schemes. Consequently, environmental appraisal of regional development plans in the context of the Structural Funds was made a mandatory obligation in 1993, when the European Commission amended the existing Structural Fund Regulations[59, 60] The amended regulations[61] required Regional Development Plans (RDPs) submitted under objectives 1, 2 and 5b to include an assessment of their impact on the environment. This constituted a binding, quasi-strategic environmental assessment requirement. In recognition of methodological problems encountered, the European Commission published *A Handbook on Environmental Assessment of Regional Development Plans and EU Structural Funds Programmes.*[62] The regulations governing the Structural Funds regulations were revised again in 1999[63] and emphasised the need to assess the compatibility of RDPs with national, regional and local environmental management objectives.[64] The requirement for environmental appraisal is set out in Art. 41(2) of these regulations.

The SEA Directive, therefore, was seen by a number of NGOs as a key vehicle for strengthening the environmental assessment requirement of the structural funds. Organsiations such as Birdlife International, European Environmental Bureau and the Council for the Protection of Rural England were particularly active in promoting the need for the SEA Directive to apply to the Structural Funds.[65] The final text of the Directive in Arts 3 and 12 ensures that the SEA Directive does not apply to the current programming periods of the Structural Funds (2000-2006/7). The Commission is, however, required to report on the relationship between the Structural Funds and the SEA Directive, with the implication (though it is not necessarily much stronger than this) that subsequent programming periods may come under the SEA Directive should the first review of the Directive so decide (Art. 12 (4)):

> *"4. The Commission shall report on the relationship between this Directive and Regulations (EC) No 1260/1999 and No 1257/1999 well ahead of the expiry of the programming periods provided for in those Regulations, with a view to ensuring a coherent approach with regard to this Directive and subsequent Community Regulations."*

The suggestion of a coherent approach in Art. 12 (4) implies that the SEA Directive would be applied to future programming periods for the Structural Funds (the exemption from the Directive only applies to the current programming periods[66]). That was certainly the desire and expectation of the NGOs seeking to secure this amendment during 2000, following agreement of the Common Position.[67] However, a coherent approach does not necessarily mean the same approach, and much will depend upon the reporting and review process and the political context pertaining at the time. It may well be that NGOs will need to argue the case just as strongly during the Directive's review process as during its development, if the full application of the SEA Directive to Structural Funds is to be brought about.

Screening:

Screening is required on a case by case basis or by specifying types of plans or programmes, or a combination of both, as for the EIA Directive. Annex II provides criteria to be taken into account in deciding which plans and programmes are likely to have significant effects and therefore subject to SEA. Where a case-by-case approach is adopted, the environmental authorities must be consulted (Art. 3 (6)). Reasons for not requiring an assessment, as well as where one is required, must also be given (Art. 3 (7)). This requirement was secured by NGOs after the Common Position. Plans and programmes affecting small areas at the local level and minor modifications to plans and programmes covered by the SEA Directive will require assessment only where Member States determine they are likely to have significant environmental effects (Art. 3 (3)). The rigorous application of the Annex II criteria will be essential to ensure potentially damaging plans and programmes do not slip through the net.

Most interesting though is the "catch-all" provision (Art. 3 (4)) for applying SEA to any plans and programmes, over and above those defined, that set the framework for future development consents:

> *"4. Member States shall determine whether plans and programmes, other than those referred to in paragraph 2, which set the framework for future development consent of projects, are likely to have significant environmental effects."*

This will allow Member States to apply the SEA Directive to plans in sectors not already mentioned by the SEA Directive in Art. 3 (2). The Art. 3 (2) definition refers specifically to plans and programme that set the framework for future development consent of projects listed in Annexes I and II of 85/337/EEC. The Commission guidance makes clear this will also include projects in those sectors not listed in Art. 3 (2) as well as projects which are in those sectors, but are not listed in the annexes to the EIA Directive.[68] Effectively, therefore this would appear to extend the catch-all beyond the scope current scope of the EIA Directive, so long as

[58] For example: An Taisce and World Wild Fund for Nature v Commission of the European Communities,, European Court of First Instance, Case Number T-461/93, 23 September 1994; Stichting Greenpeace Council (Greenpeace International) and Others v Commission of the European Communities, European Court of First Instance (First Chamber), Case Number T-585/93, 9 August 1995.

[59] Council Regulation (EEC) No. 2052/88

[60] Bradley, K (1999), Environmental Appraisal of Regional Development Plans in the Context of the Structural Funds, *Environmental Impact Assessment Review*, 19:245 257.

[61] Council Regulation (EEC) No. 2081/93

[62] Commission of the European Communities (1998), *A Handbook on Environmental Assessment of Regional Development Plans and EU Structural Funds Programmes,* European Commission.

[63] Council Regulation (EC) No. 1260/1999

[64] Clement, K (2001), Strategic Environmental Awakening: European Progress in Regional Environmental Integration, *European Environment*, 75-88.

[65] Above n. 49

[66] Above n. 52, at para. 3.8

[67] Above n. 8.

[68] Above n. 50, at para. 3.37.

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there is an appropriate plan or programme setting the framework, even though there has been no similar catch-all provision in the EIA Directive up to now. This has caused problems in the past in Member States not being able to apply the EIA Directive to new technologies or forms of development not listed in the annexes.[69] Attempts by NGOs in the past to amend the EIA Directive to make such a provision have not been successful.[70]

Environmental report

Article 5 of the SEA Directive requires the production of an environmental report, to be taken into account along with the results of consultations during the SEA process. This is an important departure from the EIA Directive, where the Commission and Member States were at pains to avoid the requirement for a single document (environmental impact statement, EIS), given the litigious history of EIA in the United States of America. In practice, of course, the "information to be provided" by the developer is invariably presented as an EIS. The acknowledgement that there needs to be a written output to the assessment process leaves the EIA Directive somewhat out of phase with the SEA Directive and now seems even less justified than at the time. Critically, a formal written output requires and enables a quality control mechanism to be implemented (see below). Key aspects of the content of the environment report are discussed below.

Alternatives:

The SEA Directive is stronger than the EIA Directive in requiring "reasonable alternatives" (taking into account the objectives and the geographical scope of the plan or programme) to be identified, described and evaluated (cf. alternatives studied by the developer in the EIA Directive). It is particularly important that the Directive should promote the consideration of alternatives since it is at strategic decision levels that alternative options need to be properly assessed, before the direction and nature of subsequent projects is determined. It is important that this requirement is not interpreted too narrowly and that, for example, "need" is questioned by the consideration of demand management options.

Direct and indirect effects:

Intriguingly, unlike the EIA Directive, there is no reference to direct and indirect effects, only significant effects, which include secondary, cumulative, synergistic, short, medium and long-term, permanent and temporary, positive and negative effects (Annex 1f). Indirect effects imply a wider scope of potential effects including geographically distant effects. There is considerable confusion over the definition of cumulative effects,[71] but Cooper[72] defines indirect effects as:

> *"effects which are not a direct result of the plan [or programme/project], often occurring away from the action (e.g. quarrying aggregates for road building) or as a result of a complex pathway. ..."*[73]

At the strategic level it would seem particularly appropriate to be considering indirect effects – effects that occur away from the immediate action in time or space, such as the aggregates example quoted above – and possibly even more so than at the project level. In practice, indirect effects are often poorly addressed at project level EIA in part at least because they are often likely to be associated with separate consent processes from the project under consideration. During the passage of the draft SEA Directive Birdlife International tried unsuccessfully to insert an amendment to include reference to indirect effects.[74]

Quality control:

The lack of EIA quality control is recognized in the latest EIA Directive five year report.[75] In the SEA Directive the importance of quality control is recognised, though achieved only following strengthening amendments promoted by NGOs,[76] which resulted in the Directive requiring Member States to "ensure that environmental reports are of a sufficient quality to meet the requirements of the Directive" (Art. 12 (2)). The exact mechanism for achieving this quality control will be down to the Member States, but could (ideally) include some form of independent body, especially important for scrutinizing authorities adopting their own plans and programmes.

Public consultation

The Directive is an advance on the EIA Directive in that it recognises the need for early consultation during the plan or programme's preparation process, and not just in the final stages. How this will be implemented remains to be seen. For some sectors there will be existing plan/programme processes that already provide the opportunity for public involvement (e.g. land use and spatial planning in some Member States), but for others new opportunities may need to be created. Draft UK Guidance on the SEA Directive for land use planning,[77] for example, is somewhat ambivalent about wider public involvement (other than the production of a scoping report and the environmental report being made available),[78] referring to the use of NGOs and interest groups as effective proxies for the wider public at strategic

[69] See CPRE *Mock Directive*, Above n. 8

[70] Ibid.

[71] Cooper, L. M. and Sheate, W. R. (2003), Integrating Cumulative Effects Assessment into UK Strategic Planning: Implications of the EU SEA Directive, *Impact Assessment and Project Appraisal,* 21 (4) (in press, December 2003).

[72] Cooper, L. M. (2003), *Draft Guidance on Cumulative Effects Assessment of Plans*, EPMG Occasional Paper 03/LMC/CEA, Imperial College London, available at http://www.env.ic.ac.uk/research/epmg/CooperCEAGuidance.pdf.

[73] Op cit, p. 50.

[74] Birdlife International (1999), The Amended Proposal for a Council Directive on Assessment of the Effects of Certain Plans and Programmes on the Environment (COM (96) 511 and COM (99) 73) Comments by Birdlife International October 1999, p.1.

[75] Commission of the European Communities (2003), Report from the Commission to the European Parliament and the Council on the Application and Effectiveness of the EIA Directive 85/337/EEC (as amended by Directive 97/11/EC): How Successful are the Member States in Implementing the EIA Directive?, June 2003.

[76] e.g. after Common Position by Birdlife International, April 2000.

[77] Office of the Deputy Prime Minister (2002), Draft guidance on the strategic environmental assessment Directive, ODPM October 2002, available at http://www.odpm.gov.uk/stellent/groups/odpm_planning/documents/page/odpm_plan_605912.hcsp.

[78] Op cit, ss 3.5.6 and 3.9.3.

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levels. For some strategic decisions, particularly where controversial, more imaginative approaches to engagement may be needed, e.g. deliberative techniques such as citizens' juries or consensus conferences.

The context of consultation and participation has evolved over recent years, especially given the agreement of the Aarhus Convention.[79] The Directive encourages early consultation during the SEA process, which incorporates the Aarhus provisions encouraging participation at the earliest opportunity, though it is not specified at the scoping stage, only consultation with environmental authorities is required at that point. Aarhus, in fact, is not referred to explicitly in the SEA Directive, but is the subject of a separate Directive which impacts directly upon the EIA Directives – Directive 2003/35/EC on Public Participation.[80] However, since Aarhus is already incorporated into the SEA Directive, Art. 2 (5) of 2003/35/EC regarding public participation concerning plans and programmes, only applies to those plans and programmes not already covered by the public participation procedures of the SEA Directive.

Tiering

The concept of tiering is explicit and reinforced throughout the SEA Directive, but particularly in Art. 4 (3), Art. 11 and Annex II. During Conciliation, German Christian Democrat MEPs sought to defeat the concept of tiering by requiring only one assessment (if both SEA and EIA applied) as an extreme means of avoiding duplication. This proposal failed to understand the importance of undertaking assessment at the appropriate level of detail according to the level of decision-making, and was fortunately defeated.[81]

It is unclear how the SEA Directive will affect those programmes/projects where there have been issues over project definition under the EIA Directive, i.e. whether a project is a project or a programme. Examples include, *inter alia*, power stations and many road schemes that suffer from "salami-slicing". In a particular example, that of the Wilton power station in the UK in the early 1990s, an EIA was carried out and consent subsequently granted.[82] The EIS made it clear that the power station was only one part of the 'project' and that other component 'projects' would be subject to separate EIAs (after the main power station consent was granted) under various separate consent processes. This included 90km of 400kv power line upgrades, a gas pipeline, and a combined heat and power pipeline. A concern with the Amendment Directive (97/11/EC) was that it still failed to resolve this issue of project definition, continuing to leave it for the courts to decide.[83] In this case the power station project is more strategic than just a single project – it is more like a programme, and sets the framework for the power line upgrades, gas pipeline etc. (they wouldn't be needed otherwise), but it is not coming forward as part of a strategic planning framework (under the privatized electricity regime proposed schemes come forward in a very ad hoc, speculative manner). (The European Commission at the time said that where power lines would have a significant effect then, in principle at least, they should be considered at the time of the power station application as part of the power station EIA.)[84] Since the powerlines and gas pipeline were not addressed under the power station EIA, now the SEA Directive will apply to programmes and plans (and recognises the importance of tiering), it seems reasonable to believe it ought to provide the solution to this problem in future. A key problem here is that the "sub-projects" could have a very significant bearing on whether the site selected is the most appropriate.

How will the SEA Directive apply in these cases, since for many power stations it is not possible to point to a specific strategic process that would set the framework (for renewable energy schemes and roads on the other hand there are possible strategic processes that might be appropriate)? The problem would appear to depend on whether the framework is truly "strategic", i.e. a top down approach to setting the framework (such as exists in the UK or Netherlands in land use planning), or a bottom up "incremental" approach to SEA where a collection of projects is seen as constituting a programme or plan (as in Portugal[85]). The former represents what is probably most commonly conceived of as strategic (but is non-existent in the UK for most power stations[86]), while the latter clearly has more immediate conceptual ties to project level EIA and the EIA Directive. However, with the incremental approach, there may be no adequate mechanism for making the assessment happen when widely different consent processes are involved in a "collection of projects". SEA has always been seen as the answer to this problem, since those more strategic issues at the programme level ought to be addressed by the SEA, prior to the individual EIAs. If the SEA Directive cannot address this problem it will be a continuing loophole between EIA and SEA.

"Scoping"

Formal mandatory scoping is required, unlike the EIA Directive where it is optional on the developer. Scoping is

[79] UNECE (1998), Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, 23-25 June 1998, Aarhus, Denmark.

[80] OJ 25.6.2003 L156.

[81] WWF and Birdlife International (2001), Recommendations for conciliation on the proposed SEA Directive, January 2001, p.1.

[82] Sheate, W. R. (1996), *Environmental Impact Assessment: Law and Policy Making an Impact II* (2nd edition), Cameron May, London, pp 140 147.

[83] The ECJ, with respect to an important motorway case in Germany *Bund Naturshutz and others v Bavarian Higher Regional Court* (Case C392/92) was able to avoid addressing this question of project definition. The Advocate General in his Opinion to the Court (3 May 1994), however, did consider it:

> *"...the purpose of the directive should not be lost by the projects which should be subject to an environmental impact assessment being given a form which renders an environmental impact assessment meaningless. The Member States must ensure that the obligation to carry out an environmental impact assessment is not circumvented by a definition that is over-strict or otherwise inappropriate, in the light of the purpose of the directive ...."* (para.70).

[84] Letter from the European Commission to CPRE, 26 June 1992.

[85] Maria do Rosario Partidario (2003), personal communication 19.10.03.

[86] Byron, H. and Sheate, W.R. (1997), Strategic Environmental Assessment: Current Status in the Water and Electricity Sectors in England and Wales, *Environmental Policy and Practice* 6 (4), 155 165.

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widely recognised as one of the most important stages in EIA and SEA and so this mandatory requirement is to be welcomed. However, while environmental authorities are to be consulted on the scope of the assessment (Art. 5 (4)), the public is not required to be consulted. NGOs sought to require this, to no avail.[87] The presence of mandatory scoping for SEA, though, and the desire in the Directive for tiering, brings into question how the lack of mandatory scoping under the EIA Directive can continue to be sustained.

Espoo and the SEA protocol

Article 7 requires Member States to put in place provision for consultation with other Member States where any of their plans and programmes are likely to have significant effects in other Member States. The Directive follows the approach of the Espoo Convention on EIA in a Transboundary Context, and the recent SEA protocol[88] to the Espoo Convention extending consultation provisions to plans and programmes.

Reasons for decision

The provision for giving reasons for the decision is stronger than in the EIA Directive, in that a statement is required summarising how environmental considerations have been integrated into the plan or programme and how the environmental report and the results of consultations have been taken into account. The reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with, must be given. Clearly it is especially important at strategic levels to justify why a particular option has been selected as opposed to other possible alternative options. The Directive thereby also promotes the integration of the assessment with the planning and decision-making process.

Monitoring

Prior to the Common Position there was no monitoring article provision in the draft Directive. This was pushed for by NGOs, such as Birdlife International during April 2000. The importance of monitoring should not be underestimated. It has been missing from the EIA Directive largely because it was often seen as imposing an additional burden on developers and competent authorities.[89] Indeed the latest Commission five year review report in 2003 recommended introducing a post-decision monitoring system as a tool for improving quality control.[90] However, in the context of the SEA Directive monitoring is now required (Art. 10), and this ties in well with the requirement for tiering, since the latter enables and provides a reason for monitoring.

Monitoring under the Directive is also required for a clear purpose: that of being able to act to remedy problems. However, monitoring is to be carried out only of the significant environmental effects of implementation of the plan/programme and is therefore potentially very restrictive.[91] This is linked to the lack of consideration of "indirect" effects in the SEA, although cumulative effects are supposed to be covered ("indirect" implies a wider scope of potential effects, including geographically distant effects). Monitoring of a wider range of indicators[92] may be important in order to pick up small but synergistic or additive cumulative effects, which on their own would not be considered to be "significant". Paragraph 2 of Art. 10 allows existing monitoring arrangements to be used if appropriate, in order to avoid duplication. However, if no existing monitoring arrangements are appropriate a new process will be needed.

Implementation

The Directive shall apply to plans and programmes of which the first formal preparatory act occurs after 21 July 2004. Transitional arrangements are provided in Art. 13 to attempt to avoid the "pipeline" problems experienced by the original EIA Directive. Where the adoption of a plan or programme that had been initiated before 21 July 2004 does not occur until after 24 months, the Directive shall apply unless a Member State judges on a case by case basis that it is not feasible and informs the public. There is potential for some ambiguity over this requirement, i.e. is the 24 month period from 21 July 2004 or from the first preparatory act where that occurs prior to 21 July 2004. Some commentators, e.g. NGOs campaigning for the fullest implementation of the Directive, would no doubt prefer it be the first preparatory act, since this would bring the implementation date for such transitional plans and programmes as near as possible to 21 July 2004. However, the 21st July 2004 would appear to be the only date that provides sufficient legal certainty[93], since the exact definition of the first preparatory act will vary across the plans and programmes of different sectors and Member States. There will be no universally recognisable date of application, as is understood for the EIA Directive.

VI. Conclusion

So why do we need SEA and will it make a difference? Too many important decisions are made at a strategic level that bind project level decisions, foreclosing options. EIA alone, therefore, is not enough. Tiering is critical and the SEA Directive makes this explicit, and includes provision for avoiding duplication. However, tiering does not mean that EIA is not required if SEA has been carried out at plan and

[87] Birdlife International, Proposed Amendments to Common Position, April 2000; and CPRE/EEB/Birdlife, May 2000 above n. 8.

[88] ECE Protocol on strategic environmental assessment to the Convention on Environmental Impact Assessment in a Transboundary Context (the Espoo Convention), opened for signature 21 May 2003 at the Fifth Ministerial Conference 'Environment for Europe' in Kiev, Ukraine.

[89] Above n. 82, at p. 112.

[90] Above n. 75 at p. 7

[91] Risse, R, Crowley, M, Vincke, P and Waaub, J-P (2003), Implementing the European SEA Directive: The Member States' Margin of Discretion, *EIA Review*, 23, at p. 466.

[92] Ibid.

[93] As found by the ECJ with respect to 'pipeline cases' in *Bund Naturshutz*, (above n. 9) and *Grosskrotzenburg* (Commission of the European Communities v Federal Republic of Germany, European Court of Justice, Case Number C-431/92, 11 August 1995.

programme level, although it may if more environmentally benign options have been chosen and no significant environmental effects from resulting projects are likely. In most cases however, EIA will still be required (but may be more focused) and iteration will then be possible back up the decision levels to inform the strategic planning processes. Tiering should be a two way process and not simply top down.

Key advances of the SEA Directive on the EIA Directive include: mandatory scoping, monitoring, catch-all screening, improved consideration of alternatives, and earlier public participation. Implementation provides a challenge for the Member States. The UK, for example, is still working out how, but intends to use one overarching Regulation under the European Communities Act 1972 to apply across all sectors in England and Wales, while the Scottish Executive intends to apply the SEA Directive to all public sector plans and programmes in Scotland. The UK Government intends consulting on a draft of the England and Wales Regulation in the autumn of 2003.

Arising out of the discussion above is the continuing anomaly of having separate legislation for EIA and SEA. The next amendment process of the EIA Directive is due over the next two years (2004/5) following the latest review,[94] and the first review of the SEA Directive will be due in 2006. This coincidence of the review processes provides an early opportunity to consider the consolidation of both Directives as a coherent whole. The analysis above has highlighted the strong similarities between the two directives (wording has in many cases simply been transferred across), and it seems difficult to sustain the original argument for separation, which was the political difficulty of trying to address both together. Since we now have both directives the review process should be seen as the opportunity to provide much-needed coherence and reinforce the desire of the SEA directive for tiering and subsidiarity.

NGOs have had significant impact on the development of the SEA Directive and therefore will need to be ever watchful that Member States implement the requirements of the Directive properly. One of the reasons for delay in agreeing the Directive was the natural desire of Member States to secure a sufficiently robust legal basis in order to avoid subsequent challenges and complaints. But such challenges may be unavoidable and indeed necessary to ensure proper compliance.

So, what has happened to policies? The agenda has changed somewhat in light of the Cardiff and Lisbon processes during the late 1990s and early 2000s. Historically there has been considerable political opposition to including policies in any SEA Directive. Most recently (2002) the Commission Impact Assessment tool[95] has been introduced and is being applied to the development of Commission policies and strategies. This tool is a form of sustainability appraisal (though with considerable emphasis on quantification) and has emerged from the EU's Sustainable Development Strategy. Consequently it represents an essentially weak interpretation of sustainable development,[96] and it is therefore worrying that EU policy level decisions may be subject to a much weaker standard of "sustainability" appraisal than plans, programmes and projects subject to the stronger environmental SEA and EIA. Some Member States are also going down the sustainability appraisal route (and have influenced the development of the Commission's Impact Assessment tool). This is particularly significant as the most strategic decisions need to ensure the most environmentally sustainable options are provided for lower level tiers. Otherwise SEA will be applied to less than environmentally optimum options dictated by policy level decisions where environmental considerations may already have been compromised to economic and social priorities. On the other hand, SEA may be seen as an important counter balance to the onward march of weaker sustainability approaches to assessment, and perhaps provide a useful opportunity to stop and reflect on how such assessment approaches should continue to evolve.

The SEA Directive has, then, arrived at an opportune time to reinvigorate the environmental integration agenda, that of the Cardiff process currently beleaguered by the much stronger social and economic agenda of Lisbon that is dominant in current EU conceptions of sustainable development.[97] While there has been positive formalisation and strengthening of EU environmental policy over the past 30 years, arguably there has been far less real change in terms of the effective integration of the environment into decision-making on the ground. While environmental integration may still be explicit in policy statements, this needs to be more than rhetoric. It is the way in which the environment is integrated that matters. If environmental considerations are forced to give way to economic growth, then the environment may have been integrated into policymaking only to be de-prioritised and effectively little more than "taken into account". This would represent effectively the loss of 30 years of progress for environmental integration. There would seem to be an urgent need to re-emphasise the environment in the wider sustainability agenda before it is permanently sidelined among the other priorities of the expanding European Union. The SEA Directive may, it is hoped, provide a much-needed boost for environmental integration.

[94] Above n. 75.
[95] Commission of the European Communities (2002), Communication from the Commission on Impact Assessment, COM (2002) 276 final, Brussels, 5.6.2002.
[96] Above n. 27.
[97] Ibid.

Appendix 10

SHEATE, W.R. (2003b), Changing Conceptions and Potential for Conflict in Environmental Assessment - Environmental Integration and Sustainable Development in the EU, *Environmental Policy and Law*, Vol. 33 (5): 219-230.

EU

Changing Conceptions and Potential for Conflict in Environmental Assessment

– Environmental Integration and Sustainable Development –

by William R. Sheate*

1. Introduction

In the European Union (EU) there is now widespread agreement that the concept of integrating the environment into policy making is a key principle of moving towards sustainable development [66]. Most recently this principle of EU environmental policy making has been enshrined in two key approaches. The first is the so-called 'Cardiff Process', and the second the development of a Directive on Strategic Environmental Assessment (SEA), 2001/42/EC [49], which moves beyond the well-established project-level Environmental Impact Assessment (EIA) process under Directives 85/337/EEC [44] and 97/11/EC [48].

This paper evaluates the changing conceptions of environmental integration and its relationship to sustainable development, from the early Environmental Action Programmes and the EIA Directive (85/337/EEC) to the most recent sustainability assessment mechanisms enshrined by the Cardiff Process and the SEA Directive (2001/42/EC). The paper reviews the status of environmental integration at the EU level and in Member States, and evaluates this in relation to institutional responses to sustainable development. Key EU environmental assessment initiatives are analysed alongside empirical evidence of environmental integration mechanisms from EU Member States. The paper concludes with an assessment of how changing conceptions are now suggesting a divergence of these two key EU environmental policy principles.

Environmental integration and sustainable development are both fundamental principles of EU environmental policy. Formally, within EU treaties, environmental integration pre-dates sustainable development (1987 in the Single European Act; cf. 1997 Amsterdam Treaty for sustainable development). But integration has also been a core element of all European Commission Environmental Action Programmes (EAPs) for considerably longer. This historical context can help shed light on the way in which these policy principles have evolved.

1.1 Integration

The first Environmental Action Programme in 1973 [40] stated as a fundamental Principle of Community Environmental Policy:

> 'Effects on the environment should be taken into account at the earliest possible stage in all the technical planning and decision-making processes.' (Title II-2)

This is the earliest manifestation of what might be considered to be integration of the environment into other policy areas and, at the time, represented a significant shift in thinking within what was then the European *Economic* Community. This approach was to be promoted primarily through the development of the EIA Directive during the second half of the 1970s and early 1980s. Subsequent Action Programmes (the Second in 1977 [41], the Third in 1982 [43], the Fourth in 1987[45], the Fifth in 1993[47] and the Sixth in 2001[50]) eventually led to the specific underpinning of the environment as a legitimate EC policy principle by Article 130r of the Single European Act (1987) and subsequently Article 6 of the Amsterdam Treaty 1997, when integration of environmental protection into other community policies was elevated to the set of principles of the EU with its own Article. Integration, in its various forms of wording, has therefore provided a fundamental cornerstone of EU environmental policy for the last 30 years. Definitions of environmental integration within the EU are many and varied, but the Maastricht Treaty (1992) reference encapsulates the essence:

> '...environmental protection requirements must be integrated into the definition and implementation of other Community policies.' Article 130r (2), Maastricht Treaty

Environmentalists have expressed this as a desire to 'achieve the effective integration of environmental objectives into all sectors of policy' [12]. This is a slightly different nuance in that it implies that certain environmental objectives should also become core policy objectives, *e.g.* 'reduce the need to travel' could be an environmental objective of transport policy and therefore become a transport policy objective in its own right [55].

The Commission identifies three 'waves' in the field of environmental integration during the period 1992–2001 [11], although the principle has clearly been around for much longer. The first wave was 1992–7 with the commitment to sustainable development, focused on the 1992 Earth Summit [64] and the Maastricht Treaty. The second wave was 1997–8, with the strengthening of integration through the Amsterdam Treaty and agreement at the Cardiff Summit in 1998 on the Commission's Communication to the European Council 'Partnership for Integration' [5], which began the so-called Cardiff Process. The Cardiff Process was the focus for the third wave from 1998–2001 and the build-up to the Helsinki and Göteborg Summits and the publication of the EU's Sustainable Development Strategy. ➤➤

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1.2 Sustainable Development

The Brundtland Commission definition is inevitably the definition of sustainable development that has stuck, not least because, like motherhood and apple pie, it is hard to disagree with:

> 'Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.' [68]

It is the ambiguity in this definition that has been the root of its success and, as discussed below, may potentially be its undoing.

The Amsterdam Treaty (1997) promotes sustainable development as a fundamental objective and is enshrined as one of the core principles of the EU in Article 2 ('balanced and sustainable development of economic activities') – a goal which environmentalists have been fighting for since the dawn of EC environmental policy. Supporters claimed that this represented real strengthening compared to the original Treaty of Rome ('harmonious development of economic activities, a continuous and balanced expansion…'), which in turn had been amended to 'sustainable and non-inflationary growth respecting the environment' in the Maastricht Treaty (1992). Some argue that it underlined the importance of protecting the environment and lent weight to the principle of integrating the environment into other policy areas [34]. However, this is debatable; it might be true if sustainable development gives some degree of priority to the environment. But the phrase refers to 'sustainable development of economic activities' which could be read as the development of economic activities that can be sustained. And the wording is light years removed from the favoured term of environmentalists [33]: 'environmentally sustainable development'. While integration was similarly elevated to a core principle, its explicit linking to sustainable development might be viewed as a potential weakening compared to the earlier wording in the Maastricht Treaty above; *i.e.* it can be viewed as something of a qualification:

> 'Environmental protection requirements must be integrated into the definition and implementation of the Community policies and activities referred to in Article 3, in particular with a view to promoting sustainable development.' Article 6 of the Consolidated Treaty (Article 3c of the Amsterdam Treaty 1997)

The Sixth EAP promotes a largely environmental perspective of sustainable development:

> 'A prudent use of the world's natural resources and the protection of the global eco-system are a condition for sustainable development, together with economic prosperity and a balanced social development. Sustainable development is concerned with our long-term welfare here in Europe and at the global level and with the heritage we leave to our children and grandchildren.
>
> This Programme identifies the environmental issues that have to be addressed if sustainable development is to come about – climate change, the over-use of renewable and non-renewable natural resources, the loss of biodiversity, and the accumulation of persistent toxic chemicals in the environment. It sets out the environmental objectives and targets that need to be met and describes how the instruments of Community environmental policy will be used to tackle these issues while pointing to the need for further action in other policy fields … This requires the integration of environmental protection requirements into other policy areas and a need for the Community to examine its current systems of governance and find ways of changing them to ensure consistency between our social, economic and environmental objectives and between the ways of meeting them.
>
> Yet, sustainable development is more than a clean environment. The social and economic implications of environmental action must be taken into account when pursuing sustainable development. So, whilst this Action Programme targets the environmental dimension of sustainable development, it also aims to improve the environment and quality of life of citizens in the European Union more generally.' Sixth EAP [50]: p.11, section 1.2

A 'greener' view of sustainable development is also encapsulated in DG Environment's Mission Statement [24], based on a reworking of the Brundtland definition:

- To promote Sustainable Development, *preserving the rights of future generations to a viable environment* [my italics].
- To work towards a high level of environmental and health protection and improvement of the quality of life.
- To promote environmental efficiency.
- To encourage the equitable use, as well as the sound and effective management, of common environmental resources.

The EU's Sustainable Development Strategy [9], however, emphasises economic and social progress above environmental integration – it is the Lisbon Process on economic and social reform (see below) that headlines the strategy (and is also Annexed) rather than the Cardiff Process on environmental integration. Quite remarkably, the entire strategy manages to avoid the use of the term 'environmental integration'. Moreover, it contains an essentially 'weak' (very weak) interpretation of sustainable development (p. 2):

> 'Achieving this [sustainable development] in practice requires that economic growth supports social progress and respects the environment, that social policy underpins economic performance, and that environmental policy is cost-effective.'

The latest EU development has been the draft European Constitution [25], which again has further elevated sustainable development, this time to being part of the Union's Objectives (Article I-3):

> '3. The Union shall work for a Europe of sustainable development based on balanced economic growth,

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with a social market economy aiming at full employment and social progress.

It shall aim at a high level of protection and improvement of the quality of the environment. It shall promote scientific and technological advance.' Article I-3 (3)

Again, sustainable development here is associated with economic growth, albeit 'balanced', rather than an environmental context. There is evidence here of a worrying trend that the environment is increasingly being sidelined by the now dominant Lisbon Process [23]. However, environmental integration is still to be found in the same form as in Article 6 of the Amsterdam Treaty, now in Part III of the Draft Constitution – The Policies and Functioning of the Union – as Article III-2:

'Environmental protection requirements must be integrated into the definition and implementation of the Union policies and activities referred to in this Part, in particular with a view to promoting sustainable development.'

So environmental integration has traditionally been seen as a precursor to sustainable development or as a vehicle through which it can be achieved or encouraged. But the real relationship between these two key principles of environmental integration and sustainable development is far from clear. McCormick [38] considers the integration principle to be '...undoubtedly the most important and far-reaching of all the basic principles' (p. 80). However, the rising dominance of more economic conceptions of sustainable development perhaps now calls this into question. A belief that environmental integration continues to be the most important of all the basic EU principles becomes harder to accept when considering the EU's Sustainable Development Strategy, and most recently the draft European Constitution. While environmental integration may still be there up front, it is the way in which the environment is integrated that matters. If environmental considerations are forced to give way to economic growth, then the environment may have been integrated into policy-making only to be de-prioritised and effectively little more than 'taken into account'. This would represent a return to the 1970s and the loss of 30 years of progress for environmental integration.

This situation contrasts with that of the early 1990s, which reflected an optimism post-Rio that the environment was beginning to move up the political agenda and global environmental problems and their solutions were seen as integral to any conception of sustainable development. The concept of environmental capacity was central – there was now clear evidence that there were real environmental limits to growth (as had been recognised previously during the rise of environmentalism in the 1960s and 1970s) [39] and what was needed was 'environmentally sustainable development'. EIA has been seen as responding actively to the sustainable development agenda and evolving accordingly [65], while Sheate suggested a decade ago (p. 207) that 'the concept of sustainable development ... now provides the best opportunity for EIA to make its real impact on decision-making. Whether it will depends crucially on whether governments are willing and ready to make the most of the opportunity. EIA in turn offers probably the best mechanism for incorporating sustainability into decision-making.' [56]

2. Key Assessment Initiatives for Environmental Integration

Three key assessment-related initiatives for environmental integration have been adopted within the EU:

- Environmental Assessment legislation, through the EIA Directive, SEA Directive, Structural Funds Appraisals, and the Habitats Directive Article 6 requirement;
- The Cardiff Process; and
- The Commission Impact Assessment Tool.

These initiatives are discussed briefly, in turn, to examine how the integration principle has evolved through assessment tools from the early conceptions in the mid-1970s to the present day.

2.1 EC Legislation on Environmental Assessment

The first approach adopted by the European Commission has been the development over the last 25 years or more of EIA and SEA – project-level environmental impact assessment and strategic environmental assessment (of policies, plans and programmes) respectively.

The lengthy history of the development of the EIA Directive 85/337/EEC is well documented [54, 56, 67, 32]. The ten years of discussion and drafting is indicative of the difficulty of achieving consensus on what an EIA Directive should cover. Even though discussions began in 1975, it was not until 1980, and after 20 internal drafts [56], that the first proposal for the Directive was officially published [42]. The proposal for the Directive was intended to establish procedures for requiring EIA of certain public and private projects. This position had not been arrived at without considerable controversy, not least over whether project-level assessment was really the best place to start on an EIA initiative, or whether plans and programmes would not have been a more effective and appropriate level for Community-wide action.

The EIA Directive 85/337/EEC was agreed in July 1985 and formal compliance was due on 3 July 1988. The Directive is a procedural one, which seeks to ensure that before a decision is made about whether consent should be given to go ahead with a development a minimum level of information about the likely significant effects on the environment has been provided to the 'competent authority' (for example, a local authority or government minister) making the decision. It does not in itself require a Member State to refuse to give consent for a project even if it is likely to be highly damaging to the environment. In principle, the Directive applies equally across all policy sectors by providing a framework within which Member States must act. Projects likely to have significant effects on the environment by virtue *inter alia* of their nature, size or location must be made subject to an assessment of their effects before consent is given. The selection (screen-

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ing) of which projects are subject to EIA is carried out through the application of two Annexes (I – mandatory EIA required; II – where Member States consider their characteristics are likely to give rise to significant environmental effects). The Directive was amended by EC Directive 97/11/EC, known as the EIA Amendment Directive, in March 1997 with implementation due by 14 March 1999.

The SEA Directive (2001/42/EC) [49], was finally agreed by EU Member States in June 2001 and is due to come into force on 21 July 2004. The EU's Fifth Environmental Action Programme ('Towards Sustainability') [47] provides a rationale for the SEA Directive stating (Part I - Section 7.3):

> 'Given the role of achieving sustainable development, it seems only logical, if not essential, to apply an assessment of the environmental implications of all relevant policies, plans and programmes.'

While the SEA Directive applies only to plans and programmes (which set the context for development projects), it is already bringing greater attention to higher policy level decision-making, since decisions made at this level are increasingly exposed as EIA/SEA moves up the decision-making tiers. Policy making was deemed too difficult politically to address at the same time as plans and programmes. Existing experience from the application of SEA (voluntary or legislated) already provides useful lessons for applying at the policy level, even before the SEA Directive has been implemented. While politically an SEA Directive for policy decision-making is controversial, the widespread application of SEA to policies in some shape or form is probably inevitable [59].

A comprehensive definition of SEA combines the essential parts of two well-known definitions [63, 52]:

> 'SEA is a systematic, decision aiding procedure for evaluating the likely significant environmental effects of options throughout the policy plan or programme development process, beginning at the earliest opportunity, including a written report and the involvement of the public throughout the process.' [58]

Conventional wisdom has it that SEA is an important tool for integrating the environment into decision-making [52] and as such offers a promising approach to helping to achieve the goal of sustainable development [51]. This assumes that environmental integration and sustainable development are mutually supportive principles, and while they can be, increasingly they are not necessarily so by definition.

EIA and SEA have also been integrated into EU Structural Funds and the Habitats Directive, even before formal legislation on SEA, reflecting the principle of environmental integration into other policy areas so indicative of the Environmental Action Programmes. Environmental appraisal of regional development plans in the context of the Structural Funds has been a mandatory obligation since 1993 [2]. In 1993, in response to criticism concerning the lack of environmental sensitivity with which it had deployed the first (1989–93) tranche of Structural Funds, the European Commission amended the existing Structural Fund Regulations [13]. The amended regulations [14] required Regional Development Plans (RDPs) submitted under objectives 1, 2 and 5b to include an assessment of their impact on the environment. This constituted a binding, quasi-strategic environmental assessment requirement. In recognition of methodological problems encountered, the European Commission published *A Handbook on Environmental Assessment of Regional Development Plans and EU Structural Funds Programmes* [6]. The regulations governing the Structural Funds regulations were revised again in 1999 [15] and emphasised the need to assess the compatibility of RDPs with national, regional and local environmental management objectives [4]. The requirement for environmental appraisal is set out in Article 41(2) of these regulations.

Article 6(3) of the Habitats Directive (92/43/EC) [46] requires an 'appropriate assessment' of the implications of plans or projects likely to have significant effects on a site covered by the Directive 'in view of the site's conservation objectives'. This is not a full SEA in the sense of the SEA Directive, since it is qualified by relating only to the conservation objectives of the site likely to be affected. It was, however, an important step in the right direction nearly ten years before the SEA Directive was agreed, and illustrates very well how the environment was being integrated into other areas through the use of EIA and SEA.

2.2 The 'Cardiff Process'

At the Heads of Government Cardiff Summit in June 1998 the EU committed itself to the integration of the environment into all EU policies [5]. The Cardiff Summit started a process of developing strategies for environmental integration for the various formations of the Council of Ministers. This was followed up by the Vienna Summit in December 1998, the 'Best Practices' workshop held in Bonn in 1999 [7], and the meetings of the European Council in Cologne in June 1999, Helsinki in 2000 and Göteborg in June 2001. The various sectoral 'Cardiff Process' strategies could also be mirrored in the Member States as a means of further developing a harmonised reporting mechanism across the EU and opportunities for transnational learning [37]. It had been hoped at Helsinki that the Göteborg Summit would result in the conclusion to the process [31]. However, Göteborg concluded that section strategies should be finalised and further developed, implemented as soon as possible and reported at the Spring European Council in 2002. The Cardiff Process was also given a wider dimension within the framework of the Sustainable Development Strategy, which was also adopted at Göteborg in June 2001 [27]. This included adding the environmental pillar to the Lisbon Process of social and economic reforms. The EU's Sustainable Development Strategy was set to be reviewed regularly at the annual Spring Environment Council meeting.

Increasingly, then, the EU has sought to bring together its 'Cardiff Process' on integrating the environment into EU policy making with its 'Lisbon Process' of aiming 'to become the most competitive and dynamic knowledge-

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based economy in the world, capable of sustainable growth with more and better jobs and greater social cohesion' [26]. The relative emphasis of the environment in relation to economic and social reforms is not without its critics. The European Environment Agency (EEA), in a briefing document for the Spring 2002 Environment Council meeting in Barcelona, was concerned that greater emphasis should be placed on environmental indicators [30]. EU Environment Ministers also expressed their concern [20], as did Members of the European Parliament (MEPs) [21]. The conclusions of the Barcelona summit [28] were widely criticised, for example by the Head of the EEA, who was dismayed at the apparent sidelining of environmental integration and environmental information [22].

At the Brussels Spring Council meeting in 2003, there was some recognition that the environmental pillar of the sustainable development strategy had lost impetus since Göteborg and that more had to be done, making a number of recommendations for action [29].

2.3 Commission Impact Assessment Tool

The most recent development in relation to integration, and reflecting the move to bring together the Cardiff and Lisbon Processes, is the Commission's Communication on Impact Assessment (COM (2002) 276 final) [10].

The impact assessment procedure is to be integrated into the Commission's policy-making process – its Strategic Policy and Programme/Activity Based Management programming cycle – and consists of two stages. The first stage is a preliminary assessment and will result in a short statement focusing on the identification of the issue/objectives and desired outcome; the main policy options available; the preparatory steps undertaken and whether an extended impact assessment is needed. The second stage is an extended impact assessment where deemed necessary from the first stage. The extended assessment is intended to carry out more detailed analysis, and will consult with interested parties, the results of which should be summarised in the impact assessment report. The Communication from the Commission includes a series of checklists and key questions that need to be answered when conducting the assessment.

This seems on the face of it to be a positive move, but it focuses very much on quantification – and where possible monetary quantification – of impacts, and explicitly recognises that trade-offs will be made (COM (2002) 276 final, Annex 2, p. 16, para. 4.2):

> 'The following sets out the principles the Commission will follow in assessing impacts:
>
> > The economic, social and environmental impacts identified for the proposed option should be analysed and presented in a format that facilitates a better understanding of *the trade-offs between competing economic, social and environmental objectives*. To show the different impacts, make comparisons easier and identify trade-offs and win-win situations in a transparent way, *it is desirable to quantify the impacts in physical and, where appropriate, monetary terms (in addition to a qualitative appraisal)*. Impacts that cannot be expressed in quantitative or monetary terms should not, however, be seen as less important as they may contain aspects that are significant for the policy decision. Nor can final results always be expressed in one single figure reflecting the net benefit or cost of the option under consideration.' [my italics]

However, there is no explicit requirement for *public* participation in this process, only consultation with interested parties and relevant experts as part of the extended impact assessment (not the preliminary), and so there is a risk that trade-offs will be made without sufficient scrutiny and transparency [62, 57]. This reflects a weak interpretation of sustainable development and contrasts with that in the Sixth EAP, though is more consistent with that of the Sustainable Development Strategy, which provides the impetus for its development.

3. Integration of the Environment into Strategic Decision-Making in Practice

So, while there is a range of assessment mechanisms that have been promulgated by the EU for promoting environmental integration, there remains the question of how these mechanisms work in practice, particularly at the most strategic (policy) levels of decision-making. This paper now reports on the most pertinent aspects of a study undertaken for the European Commission (DG Environment) to evaluate the role of Strategic Environmental Assessment (SEA) in integrating the environment into strategic decision-making [58]. The focus was on the way in which environmental considerations were being included in policy, plan and programme decision-making in all sectors. In particular, a key objective was to evaluate processes, institutions, communication mechanisms and tools within the policy making process. In the context of this paper, the study was explicitly addressing environmental integration rather than the integration of environment, economics and social factors in sustainable development terms. However, there was inevitably a close, though not always entirely comfortable, relationship between the two processes.

The research, *inter alia*, reviewed SEA and integration practice in all EU countries,[1] through a systematic review of documents, contacting key officials and semi-structured interviews in person or by telephone where necessary, in order to get a full picture of the main integration mechanisms being utilised in each Member State. Key examples of common mechanisms drawn from ten selected Member States are provided in Table 1, along with the status of SEA at the time of agreement of the SEA Directive in 2001. The Member States reported here have been selected on the basis of illustrating the range of integration mechanisms and role of environmental assessment observed in the EU as a whole.

1 The full results are not presented here, but can be found at http://europa.eu.int/comm/environment/eia/sea-support.htm#int (*SEA and Integration of the Environment into Strategic Decision-Making*, Report by Sheate, W.R., Dagg, S., Richardson, J., Aschemann, R., Palerm, J. and Steen, U.) (2001) [58].

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Table 1: Examples of Integration Mechanisms and the role of environmental assessment from selected EU Member States

Status of SEA (at time of adoption of SEA Directive 2001/42/EC in 2001)	Examples of Integration Mechanisms	Commentary: extent of integration and role of environmental assessment
Austria		
SEA not a legal requirement. Progress towards strategic environmental assessment, *e.g.* the right of the environmental Ombudsman in the province of Styria to comment on all laws that are likely to have environmental effects and to propose alternatives.	• Austrian National Environment Plan (NEP, 1995) contains clearly defined objectives and proposes more than 300 measures to achieve them. • Federal Ministry of Agriculture, Forestry, Environment and Water Management and the provincial ministries for environment deal with the task of integrating the environment in strategic decision-making. Provincial level: re comprehensive environmental programmes with a high degree of integration, using environmental quality targets and corresponding indicators. But only a few provide for monitoring or auditing issues (e.g. LA21 Graz). • Sustainability round tables and other communication tools as well as awareness raising methods are in place, but there is a weakness concerning guidance and training both for SEA and integration of the environment.	Though not yet formal SEA, there is reasonably strong integration of environmental issues into decision-making through comprehensive system of environmental reporting and environmental communication (*e.g.* 'sustainability round tables', councils on climate change, sustainable development, and public participation procedures, *e.g.* in spatial planning legislation). The National Environmental Plan (1995) acts as a comprehensive framework for Austria's environmental policy; parallel to the federal-level environmental programmes for provinces or municipalities (often in a LA21 context). The differentiated and detailed environmental legislation, eco-labelling, voluntary agreements and many other tools contribute to the fact that there is a high amount of environmental awareness.
Belgium		
SEA not a legal requirement. Main progress towards SEA being carried out in region of Flanders; proposals to introduce environmental assessment of plans and programmes into present EIA Decree.	• Three regions each with their own framework for integration, for example the regional governments of Flanders and Wallonia have adopted regional laws as frameworks for integration. Also, each region has several bodies responsible for the environment. • The overall law relating to sustainable development (SD) was adopted in 1997 (Law on coordination of federal policy on sustainable development) at the federal level. Annual reporting on LA21 issues. • Development of SD indicators; environmental indicators required for regional environmental reports. • At federal level, an interdepartmental Commission for SD is responsible for formulating the Federal Plan and promoting SD. There is inter-regional coordination among Environment Ministers for development of SD indicators.	Each region provides its own framework for environmental integration particularly with regards to EIA, environmental management, sustainable development and LA21. Both sustainable development and LA21 have in recent years become priority areas in each region. A number of bodies are responsible for the implementation of sustainable development at policy level while municipal authorities work at a local level implementing LA21. While there is no mandatory SEA in Belgium, there is voluntary SEA of transport plan and voluntary SEAs in Wallonia.
Denmark		
SEA a legal requirement for: Bills and government proposals. Ministerial guidelines on SEA in place since 1995. No public participation in assessment procedure although chance to participate in preparation of Bill during customary consultation process under Danish legislation. State Budget proposals are assessed for environmental impacts in selected areas.	• Sector action programmes on sustainable development. • 'Danish Nature and Environment Policy' presented to Parliament every four years. • Danish environmental legislation lays down organisational and procedural rules requiring communication between different authorities and stakeholders. • After elections the Minister for Environment and Energy reports to Parliament on national land use planning, and produces State of Environment Reports. • The National Protection Board of Appeal and Environmental Protection Board of Appeal monitor environmental framework laws. • The main environmental framework laws have sustainable development as a stated objective in the preamble of the laws.	Sector action programmes on sustainable development define quantitative and qualitative objectives and list initiatives to be carried out. Various systems allowing the integration of environment into decision-making at different levels of government; high degree of decentralisation. The Spatial Planning Department under the Ministry of the Environment cooperates with the National Association of Local Authorities and the Association of County Counties in Denmark in encouraging counties and municipalities to undertake LA21. Voluntary SEA of National Land Use Plan carried out. Also research and voluntary SEA of County and Municipal plans. Environmental indicators are being developed as part of SEA systems within the fields of national and regional land use planning.

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Finland

SEA a legal requirement for: State action plans and economic strategies; policies on taxation and subsidies; plans and programmes for energy, environment, transport, industry, forestry and agriculture; Committee reports; Government proposals. Guidelines in place since 1999.

- Finnish Action for Sustainable Development (1995) includes measures that vary from sectoral programmes of different ministries and governmental bodies to information campaigns of NGOs.
- National Commission on Sustainable Development.
- Sectoral programmes on sustainable development.
- Annual Ministry of Finance regulation requires the investigation of environmental effects of state budget and proposed action plans.
- Land Use and Building Act of January 2000 emphasises a more open and interactive approach to planning; local authorities are given more power in decision making.

An 'Action Plan on Sustainable Development' : strategy document with short-term definitions and proposals and long-term scenarios. Environmental impacts investigated and assessed to a sufficient degree when an authority is preparing policies on taxation, payment and subsidies, and when plans and programmes related to the environment, energy, transport, industry, forestry and agriculture are prepared. Environmental impacts assessed in preparation of policies as well as plans and programmes related to environment, energy, transport, industry, forestry and agriculture. National Commission makes recommendations on preparation of sectoral programmes on sustainable development.

France

SEA a legal requirement at policy level for proposed laws and also at regional levels for Master and Zoning plans. Voluntary SEAs have taken place since 1980s in land use planning. SEA methodology recently developed for transport infrastructure and applied to plans and programmes at regional level.

- Environmental integration is the responsibility of the Ministry of Environment (MoE).
- 1976 Law on Protection of Nature enabled the MoE to integrate environmental policy into socio-economic planning.
- Several other bodies with responsibility towards promotion and implementation of LA21 with some working directly with the MoE to help increase inclusion of environmental considerations in development programmes and decision-makers.
- Environmental integration occurs through a number of different laws (mainly related to EIA) and a sustainable development strategy exists with LA21 being implemented.
- Requirement during the development of urban zoning plans for the provision of 'state of environment' reports.

France the first country to introduce EIA in Europe. The environment is integrated to a fair extent and mainly takes place with regards to land use planning and the environmental appraisal of programmes. EIA, environmental regulations, planning documents, zoning plans and strategic impact assessment (SIA) all contribute to environmental integration. Environmental assessment takes place at policy level for those laws deemed to have an impact on the environment. Also, proposed laws must demonstrate that they are environmental and sustainable. Sustainable development and LA21 are also priority areas and a sustainable development strategy exists. Since 1990 SIA has been mandatory at policy level for proposed laws, but voluntary SIAs have taken place since the 1980s. There is also evidence that SIA is being applied to plans and programmes at a regional level.

Germany

SEA not a legal requirement. Spatial and sectoral planning procedures have made provision towards SEA particularly with regards to landscape planning and zoning/building planning.

- Federal Ministry of Environment, Nature Protection and Nuclear Safety responsible for environmental integration.
- National sustainable development (SD) strategy and a national climate protection programme (comprehensive framework with clear objectives and measures to reach these) exist. Both support the integration of the environment on different decision-making levels and serve as coordinated strategies.
- Environmental ministries of the 'Laender'.
- Environmental quality goals are in place, *e.g.* in many cities, often connected with LA21 plans.
- Various environmental concerns are integrated in numerous laws; proposal for a homogeneous National Environmental Code with the intention to summarise, adjust and harmonise the environmental legislation. Different reporting (*e.g.* certain Enquete Commissions for the Parliament), coordination (*e.g.* regular conferences of all environmental ministers of the 'Laender') and awareness-raising measures exist and are able to support the integration of the environment.

Germany is a federal country with 16 'Laender' and has detailed, comprehensive and differentiated environmental legislation, although as yet there is no mandatory SEA. But a mandatory requirement for plan- and programme-making activities of public authorities requires all relevant concerns (including environmental ones) to be considered and weighed up. A large number of commissions and councils deal with the integration of environmental concerns into strategic decision-making, especially at local level. Considerable experience with LA21: environmental reporting (including environmental data), the development of environmental indicators, tiered decision-making systems *e.g.* within spatial and landscape planning and other measures support the task to integrate environmental issues into policy making. Due to a high amount of environmental consciousness and awareness, NGOs often play a key role by strengthening environmental integration.

Netherlands

SEA a legal requirement. E-tests (environmental tests) applied to existing and proposed legislation, policy plans and regulations. Recent assessments include an inventory of policy areas at national level and an E-test of the 5th

- National Environmental Policy Plans (NEPPs) are largely responsible for environmental integration into government policies.
- Four government ministries responsible for environmental policy with the Ministry of Housing, Spatial Planning and Environment being the lead body, also being responsible for coordination.
- The Netherlands has a tiered system of planning and there is a requirement that the environment be incorporated into each level.

Long history of environmental planning; 1980s saw the introduction of planning strategies and environmental policy plans including EIA regulations and strategic-level EIA. The environment is integrated to a strong extent. A tiered system of planning is in place, with the environment being integrated throughout. National environmental policies are the main systems for integrating the environment into government policies, and for laying the foundation for environmental regulations

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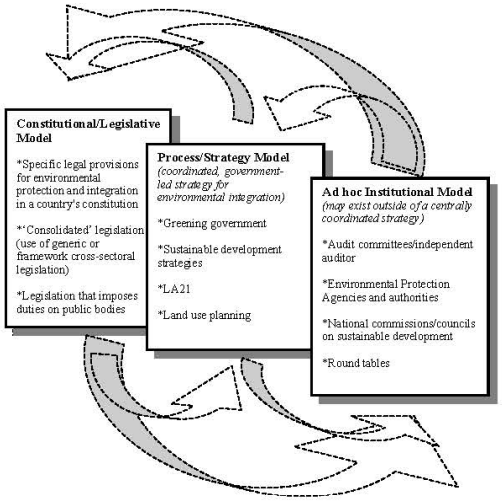
national spatial plan. Strategic-level EIA applied to decisions relating to spatial planning. Voluntary SEA methodology for application at most strategic levels developed in 1995 (SEAN).	• Commission on EIA for the provision of advice to local authorities and the assessment of the adequacy of environmental information.	and sustainable development. All government policies are subject to a review process to assess their level of contribution to sustainable development. SEA is mandatory in the Netherlands and takes the form of an E-test (introduced in 1995) for proposed legislation. A number of government ministries are responsible for environmental policy with a quality control system in place for the strategic assessment process. At a regional level, environmental integration takes place through a series of planning and environmental projects and involves a number of bodies including municipal authorities and environmental groups.
	Spain	
SEA a legal requirement at regional level in the communities of Castilla-La Mancha, Castilla y León and the Basque Country. Other regions include certain Policies, Plans and Programmes (PPPs) within the list of activities that require EIA. Environmental assessments occur during the preparation of regional development plans under EU structural fund regulations.	• Integration occurs mainly through consultative bodies at national and regional levels. At national level, the Ministry of Environment is responsible for developing national environmental plans and strategies. • Regional level is of primary importance for integration in Spain. • SEA occurs at national level only through the Regional Development Plan (as required by the EC) for Objective 1 regions, and in those regions where SEA legislation has been passed (Castilla y León, Castilla-La Mancha and the Basque Country). • Otherwise, integration only takes place through consultative bodies (at national and regional levels) and through the (unofficial) efforts of the National Network of Environmental Authorities. The Network is also the only body to issue guidance on integration. • At regional level, consultative bodies (regional Environmental Assessment Councils) exist.	Spain has a pseudo-federal structure with 17 Autonomous Communities that have wide competencies in environmental policy development and implementation. At national level integration is very limited, mainly through a consultative body (which has been widely criticised and boycotted by NGOs). The other mechanism is the informal Network of Environmental Authorities, with inter-sectoral representation; this has played a role mainly in establishing SEA guidance for the Regional Development Plans, falling under the EC structural funds regulations. Three regions have passed SEA legislation (Castilla y León, Castilla-La Mancha and the Basque Country). At a local level, many municipalities have established LA21s.
	Sweden	
SEA a legal requirement. EIAs included in government Bills and other proposals of comprehensive decision-making. Progress underway to include EIAs at an early stage of political process under the Planning and Building Act. Research project also taking place on SEA case studies.	• National Environmental Quality Goals for development in Sweden are elaborated within various areas and sectors and have been adopted by Parliament. National Boards are responsible for formulation and implementation of action programmes for achieving the goals. • The overall legislative framework for implementation of goals and action programmes is the Environmental Code (1999). The guiding principles on implementation of the Environment Code are applicable to all sectors. • National and local level LA21. • Environmental Protection Agency (EPA) presents annual report on environmental policy work in Sweden to Parliament.	The government has formulated National Environmental Quality Goals for development in Sweden within various areas and sectors. National Boards are responsible for formulation and implementation of action programmes for achieving the goals. The overall legislative framework for implementation of goals and action programmes is the Environmental Code (1999). The Code, which is the result of a major review of environmental legislation, brings many specific laws together in one code. The Swedish government has for a long time put sustainable development very high on the political agenda and adopted a National Agenda 21 (NA21). The EPA supports LA21 activities and local governments employ LA21 coordinators.
	United Kingdom	
SEA not a legal requirement. Environmental appraisals of development plans required under an administrative procedure. Government guidance on sustainability appraisal being extended to the regional planning level. Guidance on environmental appraisal of polices has also been published. Voluntary forms of SEA are also carried out on water resources strategies and multi-modal studies.	• 'Greening Government' is a 10-year-old government strategy to integrate environmental considerations into government decision making. A cabinet-level committee on the environment (ENV) as well as the presence of a Green Minister (GM) appointed in each government department are responsible for providing leadership and coordination to the strategy. • A parliamentary Environmental Audit Committee (EAC) has been set up to audit national policy; and four statutory environmental agencies are responsible for monitoring pollution, biodiversity, national heritage and the landscape change on the ground. • There is a Sustainable Development Unit (SDU) to provide civil servant support and coordination to GMs and ENV. GMs are responsible for producing annual departmental reports and the GM committee publishes an annual report to ENV and the EAC. • A Sustainable Development Commission provides a platform for key stakeholders (Business and NGOs) to engage with the government. • 15 headline indicators as part of its National Sustainable Development Strategy, monitored annually.	As part of the 'Greening Government' strategy, a weak form of policy SEA was introduced in 1991, known as Policy Appraisal and the Environment (PAE). Other mechanisms within Greening Government have included setting up cross-departmental bodies at the highest level, identifying individuals with responsibilities for Greening Government and setting up institutions and strategies with an environmental or sustainable development remit, including LA21 in local authorities. Despite the institutions and mechanisms of 'Greening Government' having been running for a decade, it has not been particularly effective. Moreover, PAE has been the least used mechanism. The SDU has published guidance on the role of green ministers and on undertaking SEAs of government policy. SEA-type processes have been introduced within regional planning (sustainability appraisal), local planning (environmental appraisal), water resources planning (SEA) and multi-modal transport planning. Generally SEA has been introduced through a mechanism of disseminating best practice guidance rather than specific regulations.

4. Discussion

Three key clusters or models of processes, institutions and communication mechanisms utilised for environmental integration were then identified from the review above (see Figure 1). In reality, a mixture of these elements can be found within Member States.

Figure 1:
Key models of processes, institutions and communication mechanisms utilised for environmental integration in the EU (after Sheate *et al.*, 2001, 2003)



Some of the process and ad hoc institutional models are focused on sustainable development, in some cases resulting in a potential weakening of environmental integration processes, *e.g.* in land use planning, moving from EIA/SEA to sustainability appraisal. This may support arguments for the use of the legislative model, creating clear requirements for environmental integration.

The role of SEA and other tools in achieving integration is highly variable. At the most strategic policy levels the use of *ad hoc* institutions and processes for achieving integration appears to be more popular than formal procedures or tools such as SEA. Formal SEA and legislative models are much in evidence in the Netherlands and Scandinavian countries, while in countries such as Austria, Germany and the UK integration is promoted through institutional and more informal mechanisms. SEA may be part of the bigger process, perhaps operating under the policy framework created by the institutions and processes. Inevitably, at strategic levels, there is a strong degree of overlap between systems and processes on the one hand, and 'tools' on the other. In many cases the tools used for achieving integration involve the setting up of systems, institutions or processes to make this happen, *e.g.* the setting up of a national sustainable development round table, or the involvement of the public in Local Agenda 21 (LA21) in setting priorities, objectives and targets. Often, elements of SEA may exist, but not be identified as such.

The relationship between SEA, other processes and tools and integration is a complex one. In the case of SEA, there are clearly a number of variations on the SEA theme, which also reflect different conceptions of sustainable development, *e.g.* environmental appraisal, sustainability appraisal, E-tests (environmental tests) and SEAN (Strategic Environmental Analysis).[2] In many cases there are elements missing from the ideal SEA process (see definition of SEA used above), *e.g.* no public participation or no separate report (some forms of appraisal). In the case of sustainability appraisal, the environment is not the only consideration trade-offs between environment, social and economic parameters may be carried out from the beginning, *e.g.* in setting objectives.

In some Member States, sustainability appraisal (SA) has moved in to fill the vacuum left by not developing SEA, most notably in the UK. Has the failure over the last 30 years to establish EU legislation on SEA until only recently (2001) also facilitated the 'weaker' conception of sustainable development to gain momentum? The evidence above suggests this may be the case. The review indicates that environmental integration processes exist in EU Member States both independently and as part of wider sustainable development processes. But the extent to which they fully integrate the environment into strategic decision-making depends to a large extent on the underlying conception of sustainable development, driven invariably by government and political will. Where it is a stronger (or 'darker green') conception, SEA is likely to be employed and address the environment more explicitly. The reverse may also be true – where SEA is used, this may generate a stronger conception of sustainable development. This latter point is significant since SEA can have an advocacy role [35] and may therefore promote stronger sustainable development. In contrast, sustainability appraisal tends to be used where there is a weaker conception of sustainable development and/or it promotes such a weak conception (*e.g.* the EU Sustainable Development Strategy and the move to 'integrated' appraisal tools). The oversimplification that is a feature of sustainability appraisal creates an inevitable risk that the environment is addressed less extensively and less transparently. Key aspects are too readily lost in reducing everything down to a few broad objectives. The experience of applying sustainability appraisal to regional planning guidance and regional economic strategies in England highlights this problem [61]. The same government guidance on SA has been a strong driver for National Parks in England and Wales to take up sustainability appraisal, even though it is *environmental* appraisal that is recommended by the Countryside Agency for application to National Park Management Plans [3].

So, at least from the experience of environmental assessment and sustainability appraisal, it is difficult to conclude that environmental integration and sustainable development are – in practice at least – any more entirely

[2] This is a particular form of SEA used in the Netherlands for certain types of plans. Further information can be found at www.seanplatform.org/.

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and inevitably mutually supportive. This can be seen all too clearly when reflecting on some key debates in the EU, such as the sustainability of transport policy. The EU's White Paper on Transport [8] is less than effective in integrating the environment into many aspects of transport policy (it was not subjected to SEA): policies on air transport, for example, lack firm and effective measures (*e.g.* a kerosene tax), while there was a distinct lack of meaningful consultation in drawing it up, even between Directorates in the Commission [16]. In the UK, current debates on airport capacity [17] are being dominated by warnings from airport operators and airlines of the dire economic consequences nationally and regionally of airports not being allowed to expand to meet forecast demand. In this case the economic argument is being promoted above all else, including by the government, but a weak conception of sustainable development allows such arguments to dominate while still apparently promoting 'sustainable' development. In this case there is an implicit acceptance that natural capital can in some way be substituted by economic capital. This contradicts apparently strong environmental commitments to a 60 per cent reduction in carbon dioxide emission by 2050 made by the UK Prime Minister Tony Blair when launching the government's Energy White Paper in 2003 [1].

A similar argument can be seen espoused even among some impact assessment professionals. Dijkgraaf [18], President Director of Shell Netherlands, in a welcome address to the International Association for Impact Assessment's annual meeting in 2002 in the Hague, the Netherlands, highlighted a desire by some developers that impact assessment become more responsive to the needs of developers and urged 'more attention to the socio-economic effects of new projects: sustainable development is after all a balance and combined result of economic development, societal responsibility and environmental care.' But EIA and SEA are some of the few decision tools that are most often established through legislation, and therefore reflect that society wants environmental regulation and constraints to be imposed upon developers.

5. Conclusions

Words and meanings have come to play an all too significant role in this debate. In the 1990s, post Rio, environmental integration was often seen as synonymous with sustainable development, *i.e.* an environmental perspective of sustainable development. Over recent years, a less environmental and more 'balanced' view has gained momentum so that the conception of sustainable development most prevalent in the early twenty-first century is one that is essentially a weak conception as far as the environment is concerned. The World Summit in 2002 had much more of an economic and social emphasis compared to the environmental focus of the Earth Summit in Rio de Janeiro ten years previously, to the extent that some environmental issues never made real headway [19].

The proliferation of meanings of integration [53] is, arguably, evidence of the weakening of its environmental credentials. There has been a subtle shift from environmental integration into all policy areas and decision-making to integration of the environment with economic and social factors. But this shift in meaning potentially has profound implications since it then becomes very easy to switch the order and priority of the three components to *e.g.* economic, social and environmental.

The word 'balance' has entered the sustainable development lexicon and become fully ensconced, but all too often represents little more than 'business as usual'. The question that needs to be asked is, 'What difference has sustainable development made to the attitudes of government, business and developers and has it helped integrate the environment into decision-making?' The continuing environmental unsustainability of so much policy-making, and continued dominance of the economic development argument, *e.g.* in the transport sector, suggests not. The agreement of the SEA Directive in 2001 represented a significant success for the environmental lobby in terms of advancing the environmental integration agenda. It reflected the DG Environment mission statement, which presents a succinct and distinctly environmental interpretation of sustainable development, and was paralleled by the Cardiff Process in the Commission and the Council of Ministers. But at the same time these essentially environmental approaches to sustainable development were being outflanked by the gathering momentum of the Lisbon Process, reintroducing socio-economic 'balance'. In reality (*e.g.* in the EU's Sustainable Development Strategy) the Lisbon Process now appears to have assumed a higher priority than, not a balance with, the environmental perspective of the Cardiff Process.

The Bruntland 1987 definition was a classic fudge, designed to be something everyone could sign up to. But,

1936 Wood engraving by Agnes Miller

Courtesy: Financial Times

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at the time, NGOs and the environmental arguments held sway, supported by environmental crises of acid rain, the hole in the ozone layer, rainforest destruction and climate change all high up the political agenda. During the latter part of the 1990s it was economic boom time and the economic dimensions of sustainable development were to the fore (alongside the deregulation agenda of the mid-1990s [36]). In this context environmental considerations could not be seen to be constraining economic growth. The World Summit of 2002 highlighted these different perspectives and expectations of sustainable development by different stakeholder groups.

The desire to bring together the Cardiff and Lisbon Processes [27] is giving rise to interest in sustainability appraisal, or sustainability impact assessment, as seen in the Commission's Communication on Impact Assessment for policies and in the review of integration mechanisms among Member States reported above. However, there are legitimate concerns that this approach may lead to a downgrading of the environment in decision-making, rather than its better integration [60]. Fundamental here is the interpretation of sustainable development being adopted: a strong ('dark green') approach underpins SEA, whereas a weaker ('light green') approach underpins sustainability appraisal, where the integration of environmental, economic and social factors is the focus, frequently manifested as a 'balance' of the three dimensions. This contrasts with environmental integration and SEA where constraints imposed on economic development by environmental capacity are central. SEA can contribute to sustainable development, but SA may not do as much for environmental integration. It may be that awareness and cognisance of the danger are sufficient, but the potential for environmental integration, as a central tenet of EU policy, to be watered down, should not be ignored.

Over the last ten years, sustainable development has provided not just a purpose, but the underlying philosophy to EIA, SEA and sustainability appraisal (SA). However, the extent to which the environment is emphasised in decision-making depends upon sustainable development as a concept that is being put into practice making a difference, *i.e.* a truly different philosophical approach to decision-making (where environmental and social imperatives are promoted) and not just 'business as usual' or 'balance'. If it is the latter then weak integration of the environment is inevitable. In the EU, the implementation of the SEA Directive is likely to give new impetus to SEA while sustainability appraisal/assessment continues to be further developed. But the Cardiff Process – which philosophically supports EIA and SEA and an environmental perspective of sustainable development – appears to be struggling against the overwhelming dominance of the Lisbon Process. The Cardiff Process's own integration with the Lisbon Process risks it becoming the Cinderella of sustainable development, and is perhaps a metaphor for the risks to environmental protection of complete absorbance into (rather than integration with) the socio-economic aspects of policy making. The lesson of Cardiff is certainly that while explicit and distinct it was strong, but once integrated with Lisbon it has lost real impetus. There would seem to be an urgent need to reclaim the imperative of environmental protection in the wider sustainability agenda before it is permanently sidelined among the other priorities of the expanding EU.

Albrecht Dürer: The owl in a struggle with birds, 1515/16

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Appendix 11

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B. has contributed significantly (34-66%).
C. has essentially performed this study independently or undertaken the majority of the work (67-100%).

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1. Design of the project including formulation of problems to be tested and design of individual experiments.	B
2. Planning of experiments and design of methods to answer the problems posed under # 1 including choice and development of methods.	B
3. Involvement in analysis and data collection.	B
4. Presentation and interpretation and discussion of the results obtained in article form.	C

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INTEGRATING THE ENVIRONMENT INTO STRATEGIC DECISION-MAKING: CONCEPTUALIZING POLICY SEA

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[5] Niras Consulting Engineers and Planners, Vestre Havnepromenade 9, 9100 Aalborg, Denmark

Strategic environmental assessment (SEA) is seen as an important tool for integrating the environment into decision-making, e.g. at plan and programme levels where it is being used with increasing regularity. At the policy and most strategic decision levels, however, it is less clear how SEA can best be used or what methodologies are appropriate in what are inevitably highly politicized contexts. This paper reports on a study carried out for the European Commission to review the mechanisms of integration at strategic decision levels and to examine the role of SEA in helping to achieve better integration. This was undertaken by first reviewing integration and SEA in all EU member states and in a range of other countries and international financing organizations, and then analysing in detail 20 SEA and integration case studies at various strategic decision levels, primarily policy and plan levels. What is clear is that SEA at the most strategic level needs to be

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flexible in relating to the policy-making process, but can bring significant advantages by providing a more systematic approach to the consideration of environmental issues. Existing institutional mechanisms may already provide elements of SEA that can be harnessed together in a more systematic process. At the most strategic levels qualitative, participation and communication processes become much more important than technical methodologies. SEA should be seen as complementary to the newly emerging tool of sustainability appraisal, although the exact relationship will depend upon the preferred interpretation of sustainable development.

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INTRODUCTION

The European Community SEA Directive (2001/42/EC) (OJ, 2001)[1] was finally agreed by EU Member States in June 2001 and will come into force in July 2004. While this directive applies only to plans and programmes (that set the context for development projects), it will nonetheless bring greater attention to the higher policy level decision-making, since decisions made at this level are likely to become more exposed as EIA/SEA moves up the decision-making tiers. Experience from the application of the SEA Directive will provide useful lessons for applying at the policy level in order better to integrate the environment into the most strategic decision levels.

[1] The EC SEA Directive can be found at http://europa.eu.int/comm/environment/eia/sea-legalcontext.htm#adopt

Integrating the environment into strategic decision-making is an essential pre-requisite for moving towards sustainable development. Furthermore, it moves beyond the traditional idea of environmental policy being a separate and discrete area of policy. The World Commission on the Environment and Development Report *Our Common Future* (1987, p. 313) stated that

> The ability to choose policy paths that are sustainable requires that the ecological dimensions of policy be considered at the same time as the economic, trade, energy, agricultural, industrial and other dimensions on the same agendas and in the same national and international institutions.

It is widely accepted that the concept of integrating the environment into policy-making (as outlined in Article 130r of the Single European Act (1987)) is a key principle of moving towards sustainable development (Wilkinson, 1998). This was highlighted by the commitment by the Heads of Government Cardiff Summit in June 1998 to the integration of the environment into all EU policies (CEC, 1998). The Cardiff Summit set off a wider process of developing strategies for environmental integration for the various formations of the Council of Ministers. This was followed up by the Vienna Summit in December 1998, the *Best Practices* workshop held in Bonn in 1999 (CEC, 1999) and the meetings of the European Council in Cologne in June 1999, Helsinki in 2000 and Göteborg in June 2001. It had been hoped at Helsinki that the Göteborg Summit would result in the conclusion to the process (Fergusson *et al.*, 2001). However, Göteborg concluded that sectoral strategies should be finalized and further developed and implemented as soon as possible and reported at the Spring European Council in 2002. The strategy was also given a wider dimension within the framework of the Sustainable Development Strategy, also adopted at Göteborg in June 2001 (EC Presidency

Conclusions, 2001). This included adding the environmental pillar to the Lisbon process (EC Presidency Conclusions, 2000) of social and economic reforms[2]. The EU's Sustainable Development Strategy will be reviewed regularly at the annual Spring Environment Council meeting, with the Barcelona European Council meeting in March 2002 being the first to do this. The Barcelona meeting also reported that two Council configurations – ECOFIN and General Affairs – had adopted their ('Cardiff process') strategies on environmental integration in March 2002 and that the fisheries policy integration strategy would be adopted before the end of 2002 (EC Presidency Conclusions, 2002). The various sectoral 'Cardiff process' strategies could also be mirrored in the member states as a means of further developing a harmonized reporting mechanism across the EU and opportunities for trans-national learning (Kraemer, 2001).

SEA is recognized as an important tool for integrating the environment into decision-making (Sadler and Verheem, 1996), and as such offers a promising approach to helping to achieve the goal of sustainable development (Partidario, 1996). This recognition of the importance of SEA is confirmed by the call for its implementation at both the international and European levels[3]. Indeed, the Barcelona European Council (EC Presidency Conclusions, 2002, p. 33) considered the SEA Directive 2001/42/EC to be 'one important instrument for the effective achievement of the integration of environmental concerns into other sectors'. Furthermore, SEA seeks to inform the decision-maker of the degree of uncertainty over impacts, as well as the level of consistency in objectives and the sensitivity of the baseline. It also provides a process in which a wider group of people can be involved in decision-making.

This paper focuses on a better understanding of the complex relationships occurring at strategic decision levels where environmental integration is being attempted. While SEA has an important role to play in integration it also needs to be seen in relation to other means for improving the early consideration of the environment in policy and decision-making, including specific mechanisms that have been developed for furthering sustainable development. The paper is based on an empirical study for the European Commission (DG XI) of environmental integration mechanisms in 25 countries and institutions, including all EU member states, and on 20 case studies of SEA and integration. In particular, the focus of the study was on the institutional and communication processes of policy-making and the potential for SEA to engage with these processes to facilitate integration of the environment into policy and decision-making. The paper discusses how SEA can be conceptualized at the policy level, in relation to the policy-making process itself and to models of integration processes and institutions available for achieving integration.

It should be emphasized that the focus of this discussion is specifically on the integration of *the environment* into strategic decision-making, i.e. attempts to integrate the environment into all policy sectors and policy-making (while recognizing that this is occurring, if at all, only in some sectors and with widely differing levels of success). The focus is not on the wider integration associated with sustainable development, i.e. integration of environment, social and economic factors. However, sustainable development mechanisms are often driven by the need to integrate the environment into decision-making processes from which it had previously been absent, and so there is an important link between the two types of integration. 'Sustainability appraisal' and 'integrated impact assessment' (i.e. impact

[2] The Lisbon process refers to the new strategic goal the EU set itself at the Lisbon European Council 23/24 March 2000: 'to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion'.

[3] International and European levels include, e.g., Agenda 21, the Biodiversity Convention, the EU's Sixth Environmental Action Programme, the Habitats Directive 92/43/EC, the Structural Funds, and the SEA Directive 2001/42/EC.

assessment covering social, economic and environmental aspects) are just two examples of terms used to describe strategic assessment that goes beyond strategic *environmental* assessment (SEA) in the parameters covered.

SEA AND THE POLICY PROCESS

There are considerable difficulties in moving from a useful concept to widespread and enduring practice (Brown and Therivel, 2000). Brown and Therivel suggest that SEA must be seen as an overarching concept and as a family of tools. In addition the emphasis should be placed on the SEA process and not on the product (the report). They conclude that practitioners will need a thorough understanding of how policy is formulated in order to be able to implement SEA effectively. This view is endorsed by other authors (e.g. Nilsson and Dalkman, 2001; Nitz and Brown, 2001), who argue the importance of SEA being tailored to the policy-making process rather than the other way around. Others see SEA as going further and providing a useful approach to policy-making itself (Stinchcombe and Gibson, 2001).

Defining SEA

SEA's application is expanding as its value as a catalyst for integrating the environment into the policy-making process at a much earlier stage is being realized. In addition, however, we also see the development of a 'sustainability assessment' tool (see e.g. Devuyst, 1999; Lee and Kirkpatrick, 2001; Smith and Sheate, 2001a, b). This raises potential confusion with some forms of SEA, particularly those that have sometimes been referred to as 'sustainability', objectives-led approaches to SEA (IEEP, 1994; Sheate, 1992). These latter forms of SEA should perhaps be more accurately described as 'environmental sustainability' approaches. Approaches to SEA also differ in terms of openness, scope, intensity and the duration over which they are used, and although design for purpose helps effectiveness, the sheer variety of approaches can be confusing and impede the take-up of SEA (Verheem and Tonk, 2000). Other classifications of SEA (see e.g. Partidario, 1999) include the description of the range of forms of SEA currently observed, such as Strategic EA, Policy Impact Assessment, Regional EA, Sectoral EA, Environmental Overview, and Programmatic EA, although, as with any classification systems, there are inevitable overlaps. The definition of SEA used in this paper combines the essential parts of two well known definitions of SEA (Therivel *et al.*, 1992; Sadler and Verheem, 1996):

> SEA is a systematic, decision aiding procedure for evaluating the likely significant environmental effects of options throughout the policy plan or programme development process, beginning at the earliest opportunity, including a written report and the involvement of the public throughout the process.

The role of SEA is dictated by how and where it fits into the decision-making process. SEA can fulfil two broad roles. It can appraise the performance of polices, plans or programmes (PPP) that have already been created; or secondly, one can recognize the fact that SEA is a systematic process that enables it to develop, assess, amend, implement, monitor and review a PPP. This distinction will depend upon the nature of the decision-making process and the communication between different actors related to both the PPP process and the SEA procedure. Related to this is the idea of 'tiering' or tailoring the SEA and its methodologies to the level in the policy and planning hierarchy. Kørnøv and Thissen (2000) also recognize the duality of SEA, identifying SEA as either having an advocative role, where its primary purpose is to raise the profile of the environment, or an integrative role, where environment, social and economic considerations are combined in a more objective way.

Policy-Making and Integration

The definition of policy-making is 'actions of Government' (Allison, 1975). Environmental policy is defined as 'public policy concerned with governing the relationships between people and the environment' (McCormick, 1991). In the late 1960s a new wave of concern regarding the environment led to 'significant changes in environmental discourse, institutions and policies' (Owens and Rayner, 1999). This has resulted in a movement away from a piecemeal and *ad hoc* approach to environmental policy-making to a more proactive cross sectoral approach, where environmental considerations are integrated into all policy areas.

Strategies for integration may take a variety of forms along an integration continuum (Wilkinson, 1998). Wilkinson identifies three forms of environmental integration strategy:

(i) *top-down integration*, binding frameworks constraining the actions of sectoral departments, often led by a strong environment ministry reviewing and regulating the environmental performance of other departments;
(ii) *bottom-up integration*, where integration occurs independently within sectoral departments through a gradual process and where the environment ministry can only persuade or influence;
(iii) *intermediate steps*, where sectoral departments face increasing constraint as they are required to apply 'integrative mechanisms' such as SEA or environmental auditing and reporting.

Wilkinson suggests that top-down represents 'strong' integration, whereas bottom-up, being incremental and piecemeal, represents a 'soft' form of integration. However, although apparently binding frameworks may be in place, in practice it is often difficult to regard these as resulting in strong integration. The potential is there, but strong integration requires effective implementation, and sufficient political will to make it happen. Conversely, a very pro-active individual sectoral department may be able to achieve stronger forms of integration than had there been a top-down framework in place. In reality, most governments are following the 'intermediate steps' route, which may at times also be reactive to external influences (e.g. the EU or international agreements).

Clearly, SEA has a role to play in taking forward the environmental integration agenda. It is able to take detailed information from different aspects of the environment and bring it together in an accessible form for the decision-maker. How effectively SEA can do this will depend on a number of factors, for example, the policy context, such as whether there is multiple or single actor decision-making (Kørnøv and Thissen, 2000), and the nature of SEA. Noble (2000) suggests that objective setting and the nature of the alternatives used are critical characteristics of SEA. For example, a truly strategic consideration of alternatives requires the assessment of *alternative options*, i.e. alternatives for meeting the objectives set, such as alternative modes of transport. This is in contrast to a consideration of *option alternatives*, e.g. alternative locations or routes that might occur in an EIA of a road scheme where the option of a road has already been decided.

One of the key benefits of SEA is that it can provide a framework within which more strategic participation of the public and stakeholders can take place. Indeed, enhancing public participation is a goal of the EU and can be seen in plans to ratify the Aarhus Convention[4]. Partnership, participation and the involvement of civil society can be seen as the basis for a sustainable political culture (European Consultative Forum on the Environment and Sustainable Development, 2000). The stages of SEA provide excellent opportunities for the

[4] The UNECE Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (otherwise known as the Aarhus Convention) was adopted on 25 June 1998, and entered into force on 30 October 2001.

inclusion of participation, in order better to inform options (scoping) and the assessment of options.

REVIEW OF INTEGRATION PROCESSES

To facilitate a better understanding of the complexity of institutional, organizational and communication models available, it is important to recognize the inter-relationships between processes and institutions. Integration may be facilitated by the setting up of a policy and decision-making process that creates opportunities for the environment to be included and/or through setting up, or by the actions of, an institution that is specifically charged with responsibility for promoting environmental integration. Communication processes tend to operate across processes and institutions, i.e. an institution may be the means by which communication is secured amongst stakeholders, or the establishment of a process may be required to secure communication. Communication processes can be broken down into several characteristics including their status (whether formal or informal), scale (individuals or institutions) and form (passive or active). A formal process may be a designated or legally required reporting structure; informal may include networks of interested people within an organization or organizations. Institutions such as a sustainable development roundtable can be the actual mechanism for communication. The form of communication can range from providing simple notification and information to undertaking face-to-face liaison meetings.

To investigate these relationships, integration mechanisms were reviewed in 25 countries and international financing institutions[5]. These covered all EU member states and a selection of different regimes including non-EU areas of Europe, and countries and institutions recognized as having some experience in this field. From the range of mechanisms considered, three broad models of environmental integration were identified and are summarized in Figure 1 along with illustrative examples[6]. In the context and limits of the study, no attempt was made to judge relative 'effectiveness' of these models, nor the effectiveness of implementation in individual countries or institutions. The simple presence of legislation or a particular mechanism obviously does not necessarily mean that it is well implemented, if at all. However, with the multitude of influences on policy and decision-making, assessing the effectiveness solely of integration mechanisms is exceptionally difficult. The main purpose in identifying the models was to gain an understanding of the range of existing integration mechanisms and therefore how these might relate to SEA processes. Effectiveness, in as much as it could be evaluated, was left to a qualitative assessment in the subsequent detailed case studies, based on evaluative criteria listed in the appendix.

A mixture of the mechanisms described in Figure 1 can be found in each country. For example, there may be a constitutional provision (though it may not be strongly enforced), little in the way of a co-ordinated central government integration strategy, but some *ad hoc* mechanisms, such as a National Sustainable Development Commission. Alternatively, there may be little legislative provision, but a strong central government strategy focused on policy and administrative mechanisms (e.g. a Greening Government process). A better understanding of these mechanisms was

[5] *EU member states*: Austria; Belgium; Denmark; Finland; France; Germany; Greece; Ireland; Italy; Luxembourg; The Netherlands; Portugal; Spain; Sweden; United Kingdom. *Non-EU countries and institutions*: Australia; Canada; Latvia; New Zealand; Norway; Slovak Republic; USA; Canadian International Development Agency (CIDA); European Bank for Reconstruction and Development (EBRD); World Bank. The final selection was approved by the European Commission Project Steering Committee.

[6] For the purposes of this paper the individual country review results are not described here, but can be found in Volume 2 of the Final Report to the European Commission (Sheate *et al*, 2001) at http://europa.eu.int/comm/environment/eia/sea-support.htm#int

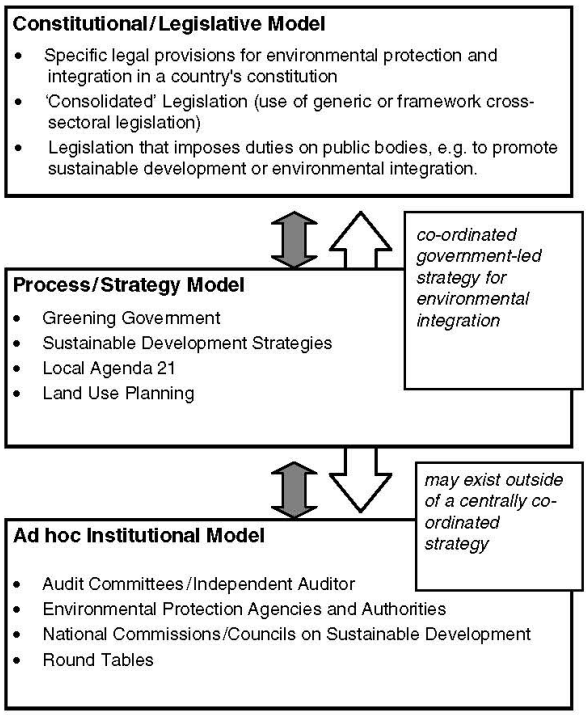

Figure 1. Key models of environmental integration

then sought through an analysis of detailed case studies.

SEA AND INTEGRATION CASE STUDY ANALYSIS

Twenty case studies were then selected according to the set of systematic selection criteria described in Table 1. These criteria were applied to a 'long-list' of over 100 potential case studies drawn from the 25 countries and institutions studied above in order to generate the short-list of 20 case studies for detailed analysis (Table 2)[7].

[7] It was also important that particularly innovative examples were examined, as well as possible poor or problematic examples. The final selection, therefore, was approved by the project Steering Committee.

Each case study was examined in detail, through examination of documentation and through the use of semi-structured interviews with key players in each case study (some 56 interviews in total across the 20 case studies). The interviews were a mixture of face to face and telephone. For each case study a set of evaluative criteria based on best practice in SEA and integration were applied to provide a systematic reporting structure and an assessment of the extent to which the case study included recognized SEA elements (even if the case study was not formally described as an SEA). These criteria are described in the appendix, and were also used, along with the results of interviews, to help assess qualitatively the relative 'effectiveness' of SEA in achieving better environmental integration. The results for each case study are not reported

Table 1. Case study short-list selection criteria

- A need to examine relationships between SEA and integration in the wider sense: therefore, an appropriate mix of examples is needed from integration/sustainable development and from SEA.
- Avoid duplication of previous research, unless particularly relevant experience to this study, and aspects that may not have been examined previously in this context.
- Balance of examples from national, regional and local levels of integration.
- Balance of examples from national, regional and local levels of SEA.
- Balance of examples from centralized and federal countries.
- Balance of examples of strong and weak integration, and full, partial or voluntary SEA.
- Examples needed where SEA is already linked to wider sustainable development integration.
- Case studies selected should be complete or nearing completion during the time-scale of this study.
- Case studies should be as recent as possible and have readily accessible information.
- Case studies to be drawn from at least eight EU member states, plus non-EU countries and international aid agencies, with the majority from the EU.
- Within the EU, appropriate geographical balance of examples from major regions, e.g. Scandinavian, Mediterranean countries.

here in detail[8], but a summary of three case studies is provided in Table 3 by way of illustration, and the overall findings inform the discussion and conclusions on conceptualizing SEA and its role in environmental integration.

The case studies, then, were taken from a variety of countries, regions and institutions and covered a broad range of SEA and integration processes and models used for the purposes of integrating environmental considerations into strategic decision-making. The wide spectrum of case studies reflected the need to analyse the interaction between SEA and other approaches to integration as well as the effect of the decision-making context on the implementation of SEA. The relationship between the wider (e.g. national) integration context within which the SEA or specific integration mechanism was operating and the detailed characteristics of the SEA or mechanism itself was analysed using the evaluative criteria.

The case studies revealed that forms of SEA are being widely applied at the plan level, but also increasingly at the policy level, and that SEA is being used as an important means of integrating the environment into these different levels of strategic decision-making. Significantly, a number of the integration case studies also revealed the presence of what can be regarded as key SEA elements, even if not structured formally as SEA (e.g. LA21 in Graz, Austria; Netherlands National Policy Plan; Environment Canterbury, New Zealand).

From this analysis, it became clear that the historical origins of SEA approaches have been critical in shaping the types of SEA now being observed, and furthermore offer a variety of ways in which existing integration mechanisms might be better tailored to accommodate a more systematic SEA process (and *vice versa*). An alternative classification of SEA approaches consequently emerged from the case studies (Figure 2) and the case studies were then grouped according to this new classification (Table 4).

Re-Classifying SEA

Overall, four broad models of SEA that embrace environmental integration and SEA's role within it were identified following the case study analysis (see Figure 2). This classification, emerging as it did from the case studies, provides a useful way to conceptualize SEA, and a means for framing an analysis of the basic strengths and weaknesses, in integration terms, of practical examples of SEA.

[8] The full results can be found in Volume 3 of the Final Report to the European Commission (Sheate *et al*, 2001) at: http://europa.eu.int/comm/environment/eia/sea-support.htm#int

Table 2. SEA and integration case studies

Country	Case study
Austria	1. Local Agenda 21 Graz (2000). 2. SEA of Land Use Plan of Municipality of Weiz (Styria) (1999).
Canada	3. World Trade Organisation Negotiations–Canadian SEA (1999).
Denmark	4. SEA of Report on National Planning (1999/2000).
Finland	5. Thematic Evaluation on Environment and Development in the Finnish Development Co-operation, Ministry for Foreign Affairs (1998).
France	6. SEA and Multi-Modal Infrastructures: the case of the North Corridor (1999).
Germany	7. Land-Use Plan and Integrated Landscape Plan Erlangen (2000).
Ireland	8. Marine & Coastal Areas and Adjacent Seas (1999)–part of North Atlantic assessment under OSPAR Convention. 9. Eco-Audit (Appraisal) of Pilot Eco-Audit of National Development Plan 2000–2006 (Dept of Finance) (2000).
Netherlands	10. National Environmental Policy Plan 3 (1998).
New Zealand	11. Canterbury Regional Council–Local Environmental Management Strategies and Stakeholders (2000).
Portugal	12. National Council for the Environment and Sustainable Development (1999)
Slovak Republic	13. Land-Use Plan Bratislava (2000).
Spain	14. Regional Development Plan 2000–2006 (Objective 1) (2000). 15. Castilla y Leon: SEA for Wind Power Regional Plan (1999).
Sweden	16. Drinking Water Supply for the Stockholm Region (1997).
United Kingdom	17. Greening Government: Environmental Audit Committee and Green Ministers (2000). 18. Strategic Defence Review (2000). 19. Yorkshire Forward Sustainability Appraisal (1999).
World Bank	20. Country Assistance Strategies and The Environment Programme.

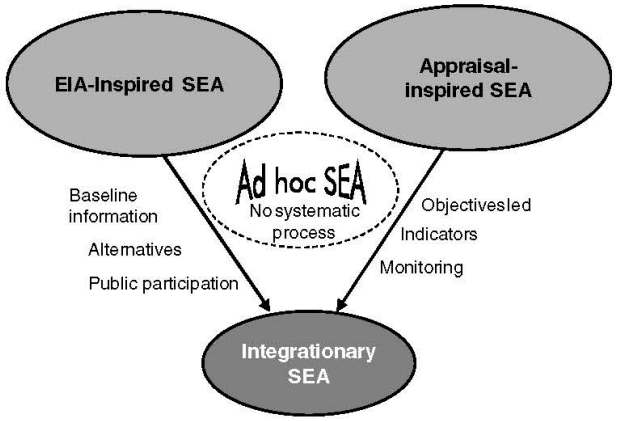

Figure 2. The relationship between different forms of SEA. Reproduced with permission of the European Communities, © European Communities, *SEA and Integration of the Environment into Strategic Decision-Making*, 2001

Table 3. Illustrative case studies

Local Agenda 21, Graz, Austria
Type of case study: integration
The case study is a good example of successful integration of the environment into strategic decision-making for a comprehensive set of policies at local level. An objectives based approach (23 quantitative environmental quality goals) combined with a baseline reference survey was used to assess the impacts of more than 200 policy measures and to identify the environmentally optimized alternatives. There were numerous participation possibilities for stakeholders who could comment on the LA 21. Moreover, a qualified public is responsible for monitoring LA 21 Graz. The first monitoring phase was completed in March 2000. As LA 21 Graz is seen as an ongoing process the next monitoring is planned for 2005. A suitable balance between technical methodologies, expert judgement and communication processes ensured transparency in assessing the environmental effects of LA 21 Graz. The integration case study can be judged as successful; it strongly and effectively supports the integration of the environment into strategic decision-making. In particular the results of the monitoring (quality control) allow the decision-makers to identify the most important environmental problems. The case study can be classified as 'integrationary SEA' by having the four defined types of SEA/integration. A possible weakness is that LA 21 Graz is focusing on environmental issues, but only to a limited extent on social and economic ones.

Eco-audit (Pilot), Ireland
Type of case study: SEA (environmental appraisal)
The eco-audit or environmental appraisal is an objectives based appraisal and is the result of the government's commitment to fulfilling the objectives of the National Sustainability Development Strategy. It can be described as a plan appraisal SEA. Introduced in 1999 as a 'pilot' study the eco-audit was designed to be proactive in nature and to occur at the policy formation process. Ten pilot exercises were chosen including the Eco-Audit of the National Development Plan (NDP) 2000–2006. Procedural guidelines are available from government. The eco-audit procedure is a six-step process not unlike project level EIA. Subjective judgement is used to assess impacts through the use of a checklist. This checklist is based on levels of 'significance' at screening and scoping stages and does not clearly define what is 'significant' and what is not. There is no requirement for public participation, although two NGOs were involved with NDP Eco-Audit. Also, there is no use of baseline data. Much discretion is given to those carrying out the eco-audit, which may lead to discrepancies including poor implementation of guidelines. Alternatives are not considered in the process. Despite these apparent weaknesses the eco-audit is seen as a positive step and a valuable tool towards the integration of the environment into strategic decision-making. An evaluation of the results and a workshop, after the pilot exercises are completed, should help identify areas for further development/improvement.

SEA of Strategic Defence Review, UK
Type of case study: SEA (EIA inspired)
The first major SEA by a UK Government Department, this was an *ex post* appraisal (EIA inspired) by the Ministry of Defence (Defence Estates Agency) of the Government's 1998 Strategic Defence Review (SDR). The SEA was published in 2000. It included a number of different (vertical) levels of assessment, but was very programme focused on specific training areas and activities, to quite a large extent because it was pushed in that direction by the various stakeholders. The scope was severely constrained (only activities covered by the SDR could be addressed, and so few real alternatives could be considered). Hence the focus tended to be on identifying impacts and the consideration of mitigation measures. The SEA therefore occurred too late in the process to influence the SDR. It has, however, set in train a much bigger integration process, including the development of objectives, targets and indicators, and sustainability appraisal. Central to the SEA have been communication and stakeholder involvement, and auditing and monitoring. Part of the follow-up process includes the development of guidance and training. The SEA is freely available in hard copy, on the internet and on CD-ROM. It appears to have engendered a real sea change in attitude to the environment within the Ministry of Defence as a whole.

Table 4. Case study examples of SEA models

EIA-inspired SEA	□ North Corridor SEA in France (assessment of a transport corridor; highly data dependent). □ Strategic Defence Review SEA in the UK (heavy reliance on a baseline assessment). □ Swedish drinking water supply SEA (baseline and assessed significance of impacts). □ Irish Marine SEA (scientific approach to establish the baseline and assess significance). □ Wind farms SEA in Castilla y Leon (primarily EIA-inspired SEA). □ Land Use Plan, Bratislava (& a little appraisal inspired). □ Regional Development Plan 2000–2006, Spain.
Policy analysis/ appraisal-inspired SEA	□ SEA of land use plan in Weiz Austria. □ Yorkshire Forward in the UK. □ Eco-audit in Ireland. □ Land Use Plan and Integrated Landscape Plan, Erlangen, Germany.
Integrationary SEA	□ SEA Report on National Planning in Denmark. □ Environment Canterbury, New Zealand. □ Netherlands National Policy Plan. □ Canadian trade negotiations (subject to implementation). □ LA21 in Graz, Austria.
Ad hoc mechanisms of environmental integration	□ National Council on Environment and Sustainable development in Portugal. □ Environmental Audit Committee and Green Ministers in the UK. □ World Bank CASE programme (includes elements of SEA, e.g. state of the environment reports as a baseline survey). □ Finnish Development Co-operation, Thematic Evaluation.

(i) *EIA-inspired SEA*. This approach originates from ecological/resource management disciplines. It includes a base line assessment of a preferred option or alternative locations. There is more emphasis on technical methodologies and a necessity to undergo a systematic assessment procedure. This form of SEA is particularly used at the programme level. Often this is an incremental development from EIA, and because it is more informed through baseline data (e.g. about sensitive elements of the environment) is more likely to be able to address indirect effects as well as direct. The EU SEA Directive 2001/42/EC promotes primarily EIA-inspired SEA, although with some reference to wider environmental objectives.

(ii) *Policy analysis/appraisal-inspired SEA*. This approach originates from political science and policy analysis. Impacts of a preferred option are appraised against objectives. There is no baseline survey, and often little or no direct public participation. This model is often used within regional and spatial land use planning, and sustainability appraisal.

(iii) *'Integrationary' SEA*. This is focused on an objectives-led process, and is a combination of the first two models. Impacts, direct and indirect, are appraised against a combination of an environmental baseline survey and objectives. The process begins early in the development of the policy and investigates alternative means of achieving those objectives. Public participation is generally an important component of the process. This form of SEA is more likely to be found where there is a strong national environmental legislation and policy framework.

(iv) *Ad hoc mechanisms of environmental integration*. These are mechanisms that utilize techniques such as roundtables, audit committees and state of the environment reports. These tools often fulfil similar roles found within elements of SEA. However, there is no systematic process providing discrete hooks into the developing policy.

Figure 2 illustrates a classification that better reflects the way in which SEA has evolved over the last 10 years. It focuses on the crucial elements of best practice, such as the importance of alternatives and public participation and the role of objectives, targets and indicators. The classification indicates that it is a hybrid of EIA-inspired and policy appraisal-inspired SEA that forms the optimum SEA process for environmental integration. Figure 2 demonstrates diagrammatically the relationship between the four SEA types discussed above. *Ad hoc* SEA exists separately, but within this model as elements of both EIA-inspired and appraisal SEA help inform the institutions and processes seen within it. For example, a state of the environment report can be related to the baseline survey of an EIA-inspired SEA, and a sustainable development roundtable can help determine the SEA objectives and indicators, which are essential components of appraisal SEA. The case studies were then grouped according to this classification of SEA (Table 4).

DISCUSSION

Theoretically, integrationary SEA is the optimum form of SEA in terms of integration. It emphasizes

(i) an early start to the SEA so that is can inform the developing policy process,
(ii) the assessment of significance against both objectives and the baseline,
(iii) consideration of alternative means of meeting the objectives (options) and
(iv) a strong emphasis on public participation.

The advantage of assessing a range of options is that it allows environmental considerations to have an influence on the selection of a preferred option, since different options will have different environmental impacts. Early public participation is critical to environmental integration in order to focus on problem solving and consensus building, and to allow the environment to have a voice, rather than merely commenting on proposed solutions. Appraisal forms of SEA tend to be less effective at integration since they are often poorly informed. In theory they can be done with little or no baseline information, and therefore may not bear a great deal of resemblance to reality on the ground. They are also often carried out on a preferred option only, as in the Yorkshire Forward and Irish Eco-Audit case studies examined above. However, one of the benefits of appraisals is that they can be undertaken relatively quickly and easily and may provide a stepping stone to something more substantial. EIA-inspired SEAs are also likely to be less effective at integration because their resource intensive requirements means they generally occur further down the policy planning hierarchy, after so many crucial decisions have already been made without any environmental consideration.

Ad hoc mechanisms generally lack a systematic treatment of environmental considerations within a structured process (although they may be elements within such a process). In the absence of such a structured process iteration is much more difficult between potentially equivalent stages of SEA. A systematic process such as SEA helps facilitate smooth communication processes both horizontally and vertically, i.e. between organizations and institutions, and between decision levels, and maximizes the effectiveness of institutions. This horizontal and vertical communication is particularly important in federal countries (such as Spain, Germany, Austria) where different government levels are very independent, and there may be (as in Spain) little inter-sectoral integration.

From a methodological point of view EIA-inspired SEA is more dependent on tried and trusted EIA methods and informed by scientific surveys and quantitative data and models (e.g. North Corridor, France; SEA of SDR, UK). Appraisal is more qualitative and since it is invariably based on expert opinion is

inevitably relatively subjective. This subjectivity need not be a problem if the process is transparent and subjected to sufficient public and expert scrutiny, although unfortunately this is often lacking in many current appraisal forms of SEA. The inheritance of EIA has, in the past, perhaps acted as a constraint on developing more appropriate SEA methodologies because of the focus on technical detail. Consequently it was difficult to see beyond the detail and that SEA need not be EIA writ large. Whatever the methods used – and integrationary SEA will draw on methods from both EIA- and appraisal-inspired SEA – they need to be well applied in a systematic and transparent process. An assessment component to integration is both desirable and essential for taking the integration agenda to the next level of providing something to audit (as in LA21, Graz, Austria; World Bank CASE programme). SEA is the most systematic way of achieving this, and also helps in setting and monitoring targets and indicators through its provision of baseline information. Furthermore, as more appropriate data becomes available at strategic levels on a cumulative basis, and State of the Environment reports become more commonplace, so the absence of suitable baseline data may cease to be a limiting factor. An appraisal approach can therefore start to move towards a more integrationary SEA by utilizing more available baseline information (Smith and Sheate, 2001b).

At the policy level a formal SEA procedure may *seem* to be more difficult to apply as the formal processes existing at the plan level are not available at the more fluid policy level. Instead it is more common to apply informal mechanisms and place greater emphasis on communication and participation of stakeholders. In other words, more emphasis is placed on processes rather than methodologies, and changing attitudes rather than focusing on the quantification of impact significance. However, it may be that there is simply so much less experience in applying SEA to policy level decision-making that it is being developed 'on the hoof', in a piecemeal fashion. Hence only certain elements are apparent.

There are a number of possible options for applying SEA at the policy-making level. One option would be a systematic and formalized SEA procedure similar to that in the SEA Directive on plans and programmes. Another would be to rely on the *ad hoc* application of different environmental integration tools to fulfil the various elements of SEA. SEA could also be integrated into sustainability assessment, or could be integrated into the mainstream policy process so that it is indistinguishable. The likelihood is that all approaches are valid with varying degrees of effectiveness, depending on the particular circumstances and context. While SEA at the policy level needs to be flexible, the same is also true of policy-making processes into which it is trying to fit, so that both SEA and policy-making can be complementary in promoting sustainable development.

SEA's Role in Environmental Integration

SEA, particularly in its more traditional form, can be seen clearly as a product of a more science-based policy-making paradigm. The role for EIA-inspired SEA became less clear as baseline data for more strategic decisions was frequently unavailable. The new classification of SEA outlined above, and the case studies themselves, suggest that the objectives-led form of SEA, together with associated monitoring, is more easily adapted to effectiveness and outcome-based policy-making.

Figure 3 illustrates how elements of SEA may already exist in the form of other processes or tools. It demonstrates how these different elements can be linked together to form a more systematic SEA process. The benefits of such a systematic process would include integrating environmental considerations throughout the policy cycle, co-ordinating inputs, both horizontally and vertically, from different institutions and providing a communication and reporting framework within which environmental integration can be prioritized,

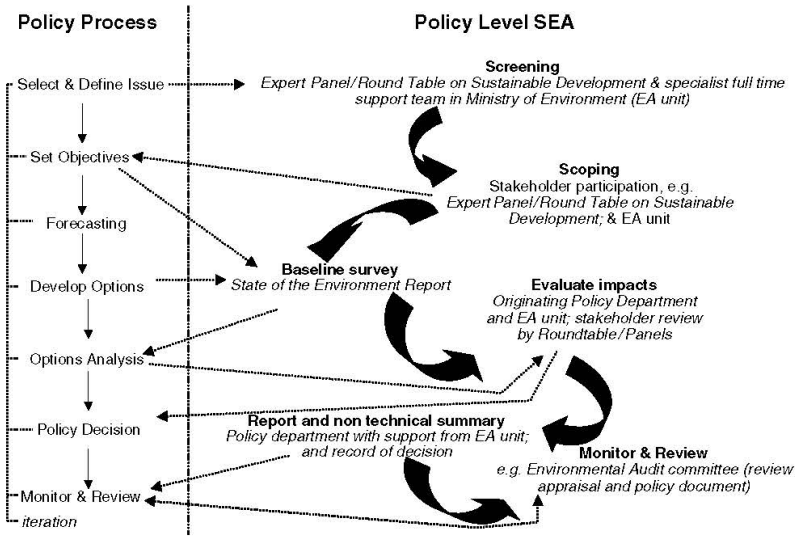

Figure 3. Scheme for integrating examples of existing processes and tools into SEA and a generalized policy process. Reproduced with permission of the European Communities, © European Communities, *SEA and Integration of the Environment into Strategic Decision-Making*, 2001

implemented and monitored. The advantage of linking these different *ad hoc* elements together to help deliver an SEA at the policy level lies in the systematic treatment of environmental considerations throughout the policy-making cycle. SEA can act as a series of hooks from the integration strategy linking to the policy-making strategy, ensuring that the two processes inform each other at timely intervals.

Politically, there have been concerns about applying SEA at the policy level for fear of constraining political choice. In some countries, forms of SEA, e.g. SEA of Bills in Scandinavian countries, have been developed, which create a framework within which subsequent SEAs and EIAs can take place. The Dutch E-test is a simple and flexible form of SEA for pieces of legislation. In others, more sceptical of imposing rigorous SEA on a fluid policy process, wider integration models can be seen to be favoured, including the development of sustainability appraisal (e.g. in the UK). The review has shown, however, that there is a suite of processes and tools that can be used, but that they need to be used in a more systematic and co-ordinated way to be effective.

CONCLUSIONS

In conclusion, a discrete process designed to inform the policy-making process of the environmental consequences at key points is both desirable and feasible. SEA should begin at the outset of the policy-making process and run parallel to it throughout, covering alternative options for achieving the objectives set out in both the policy and the SEA. Integrating the environment only implicitly rather than explicitly within the policy-making process may lead to trade-offs being made earlier on in a less transparent way. Although not essential, the most 'effective' SEA (in terms of immediate SEA outcomes) occurs when there is a legal obligation to undertake it (or as in the case of the Land Use Plan, Weiz, Austria, it was the draft SEA Directive that provided an effective impetus for carrying out the SEA). However, at the highest policy levels it is most

important that any legal obligation should be prescriptive only in terms of outcomes, rather than in detailed procedure and methodology. It would, though, be desirable to indicate minimum procedural stages in the legislation (e.g. scoping, analysis of alternatives, public participation) for which detailed procedures could then be suggested in guidance.

Even in the absence of legislation, guidance and training (along with the political will to implement it) can help promote integration of the environment into the most strategic decision-making. The revised policy appraisal guidance in the UK was found to be one of a number of drivers in promoting the application of SEA to the Strategic Defence Review (SDR), for example. Key to making SEA happen in practice at strategic levels, found in a number of the case studies, appears to be the provision of appropriate leadership and a central communication focus (e.g. a named individual) to facilitate transparency and effective networking of parties and individuals. The leadership can then provide the core around which the right team of experts can be built, emphasizing the need for interdisciplinarity, especially in wider 'integrated' appraisals.

A flexible form of SEA is needed at policy-making levels, and existing strategic processes should be examined for compatibility to the SEA process. Fears about lack of appropriate methodology need not necessarily be a barrier, since SEA at the most strategic levels is about process more than methodology and becomes focused on communication and participation with stakeholders. Tiering in SEA and EIA is essential, e.g. between different tiers of land-use planning; in its absence communication processes can become broken or interrupted, creating dissonance with other levels of decision-making. Tiering also provides a means and an incentive for auditing and monitoring. Since the policy process is often cyclical, feedback from the SEA to and throughout the policy process is essential if integration is to be made effective (e.g. through the use of indicators).

The development and application of appropriate methods of engaging stakeholders and the public at strategic levels can be difficult, but nonetheless essential. Particular effort is required to identify the 'affected public'. Consultation is often chosen as the means of public participation (this is true in the SEA Directive), although this is of course one of the 'lowest levels' of stakeholder participation, where comments are simply sought on the SEA report and taken into account. Earlier participation is needed: NGOs may be able to act as a proxy for the wider public, but it should not be assumed they can in all cases. It may be necessary to establish an organized and/or qualified public for the purpose (as was used in LA21, Graz and now is also being used in Austria in the Vienna Waste Management Plan and the development plan for Northeast Vienna). Examples of organized/qualified public might include the use of techniques such as citizens' juries and consensus conferences. However, many stakeholders may be more interested in the detail of implementation on the ground (i.e. subsequent lower level decision-making, in the form of projects and site-specific details). This can force the SEA process to attempt to address solutions rather than problems and at a level of detail that is inappropriate for a truly strategic consideration of options (this was true in the SEA of the SDR in the UK). Effort may be needed therefore to encourage participants to focus on strategic issues in order to help avoid hijacking of the SEA by more parochial views.

There is considerable momentum now for wider sustainability appraisal, often promoted as an alternative to the environmental focus of SEA. However, care is needed to ensure the environment is not diminished in decision-making as a consequence of taking a more 'integrated' approach through sustainability appraisal (SA). SEA and SA have different objectives and, it is suggested, should be conducted together or their processes integrated to ensure the environment does not lose its

explicit recognition in decision-making. Trade-offs should be transparent and carried out by the decision-making process, rather than by the tool being used. SEA need not, of course, completely lack socio-economic considerations. In some cases socio-economic effects may be directly linked to environmental effects (e.g. the effect of noise on house prices) and as such are appropriate for inclusion in SEA. SEA and SA should, therefore, be seen as complementary to each other. The actual relationship between SEA and SA will depend upon the preferred interpretation of sustainable development. If a 'balanced' view is taken SEA will no doubt be seen as existing below SA in the assessment tier. If a stronger environmental view is taken then SEA may be seen as a preferable alternative to SA, or at the very least as a means of strengthening wider sustainability appraisal where it brings baseline information together with objectives led assessment.

Greater effort is needed, though, to improve the quality of baseline information against which policies and options can be assessed (a problem particularly noted in the French North Corridor case study). This can be achieved, for example, through the development of indicators and the production of State of the Environment reports at all levels – national, regional and local – and through developing improved consistency in data collection and GIS systems.

Finally, the SEA Directive will provide a systematic process for integrating the environment into decision-making at the *plan* and *programme* levels in EU Member States. As has been shown, SEA can also provide a means of integrating the environment into higher *policy* level decision-making, through EIA-inspired SEA or through policy appraisal-inspired SEA, or in an ideal form of 'integrationary' SEA, which combines key elements of both. As the SEA Directive is implemented in member states at the plan and programme levels, so attention will be drawn to policy level decision-making, to ensure that the environment is effectively integrated at an early enough stage. The SEA Directive may also, therefore, act as a catalyst to SEA at the policy level by exposing decisions made prior to SEA being applied at the plan and programme levels.

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APPENDIX. INTEGRATION AND SEA EVALUATIVE CRITERIA

Integration criteria	Evaluation of integration	Assessment criteria	Evaluation of assessment/SEA
Political leadership	Government responsibilities at highest level? Do key individuals hold environmental remits/have responsibilities? Is there a clear strategy for Sustainable Development? (State level of commitment.)	Objectives led	Yes/no
Institutional commitment	Do institutions with an integration remit exist? (Yes/no examples.)	Integration	Yes/no–is the SEA integrated into the development, assessment, amendment and delivery of the policy or plan?

Integration criteria	Evaluation of integration	Assessment criteria	Evaluation of assessment/SEA
Co-ordination	Committees responsible for co-ordinating different mechanisms for integration–vertical and horizontal (e.g. European and national, and health and transport)? (Yes/no examples.)	Alternatives/ options	Yes/no/only do nothing (give examples)
Communication reporting	Clear lines between bodies involved? (Yes/no examples.)	Visioning	Yes/no examples
Guidance training	Availability of guidance and attendance on training courses on the mechanisms of integration? (Yes/'no examples.)	Environmental statement	Yes/no–comment on availability to public. Is it used to assess the significance of impacts?
Awareness raising	Is information on integration easily available? (Yes/no examples.)	Methodologies	Technical/non technical–give examples
Targets/ objectives/ Indicators	Benchmarking–clearly defined? (Yes/no examples.)	Participation	Early/late/non-existent and who (examples of techniques used) (take into account tiering, i.e. participation within a policy will be different to one at a programme level)
Appraisal/ assessment	Appraisal/assessment of emerging policies undertaken? (Yes/'no examples.)	Timescales	In years
Instruments	Instruments of integration are in place–e.g. green taxes, public service agreements etc.	Sustainability impacts	Yes/no examples
National/local sustainability	National and local sustainability strategies (inc. LA21 in place)? (Yes/no examples.)	Significance	Yes/no–comment
Allocation of spending	Allocation of spending includes environmental criteria? (Yes/no examples.)	Non-technical summary	Yes/no–comment
Monitoring/ auditing	Quality control procedures in place? (Yes/no examples.)	Monitoring	Yes/no–comment

Paul Hamblin, William Kennedy, Ulf Kjellerup and Sally Russell.

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Appendix 12

SHEATE, W.R., Byron, H.J. and Smith, S. P, (2004) Implementing the SEA Directive: Sectoral Challenges and Opportunities for the UK and EU, *European Environment*, Vol. 14 (2), 73-93.

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The extent of **William Sheate's** contribution to the research article is evaluated according to the following scale:

A. has contributed to collaboration (0-33%).
B. has contributed significantly (34-66%).
C. has essentially performed this study independently or undertaken the majority of the work (67-100%).

Declaration for the individual elements	**Extent (A,B,C)**
1. Design of the project including formulation of problems to be tested and design of individual experiments.	B
2. Planning of experiments and design of methods to answer the problems posed under # 1 including choice and development of methods.	B
3. Involvement in analysis and data collection.	B
4. Presentation and interpretation and discussion of the results obtained in article form.	B

Other comments
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[1] Co-authors are defined according to the Vancouver rules see http://www.icmje.org/index.html

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3. Involvement in analysis and data collection.	B
4. Presentation and interpretation and discussion of the results obtained in article form.	B

Other comments
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IMPLEMENTING THE SEA DIRECTIVE: SECTORAL CHALLENGES AND OPPORTUNITIES FOR THE UK AND EU

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This paper examines the implementation of Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (the 'SEA Directive') in the UK and draws out wider implications from the UK approach for implementation across the EU as a whole. The paper begins with a brief overview of the UK's progress in implementing the directive in relation to three key issues: establishing the legal framework for implementing the directive; identifying those plans and programmes to which the directive will apply and providing support for implementation (e.g. through guidance and training). The paper then focuses on three sectors – land use planning, water and energy – and discusses key issues affecting implementation in each sector. In the land use planning sector, for example, a key issue is the incorporation of the SEA Directive's requirements into a wider sustainability appraisal process, which addresses economic and social as well as environmental concerns. The sectoral comparison is followed by a discussion of the issues confronting the UK and the potential lessons for the EU as a whole and a series of recommendations to guide implementation.

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INTRODUCTION

In summer 2001, the EU legislated for Strategic Environmental Assessment (SEA) with the adoption of Directive 2001/42/EC on *the assessment of the effects of certain plans and programmes on the environment* (the 'SEA Directive'). The SEA Directive must be implemented in EU member states by 21 July 2004 and requires certain plans and programmes

likely to have significant environmental effects to undergo a formal environmental assessment. The SEA Directive is largely 'procedural' in nature and sets out a number of steps that must be undertaken as part of an environmental assessment (e.g. scoping, establishing the baseline, considering alternatives and proposing mitigation and monitoring measures). The methodology for undertaking each procedural step is left to individual member states to determine (in keeping with the principle of subsidiarity).

This paper begins with a brief overview of the UK's progress in implementing the SEA Directive with respect to three key issues:

- the legal framework for implementing the directive;
- identification of the plans and programmes to which it will apply and
- the provision of support for implementation (e.g. guidance and training).

The paper then focuses on implementation of the SEA Directive in three sectors: land use planning, water and energy. This sectoral comparison is followed by a discussion of the issues arising for the UK and the potential lessons for the EU as a whole.

The Legal Framework

Historically, the UK Government has had a somewhat schizophrenic approach to SEA (see e.g. Wood, 1995; Glasson *et al.*, 1998; Sheate, 1996). On the one hand, it has been resistant in varying degrees to EC legislation in the area. It had, for example, vetoed a very early draft of the SEA Directive at the Edinburgh summit in 1992 (Cerny and Sheate, 1992). On the other hand, it has introduced its own (weaker) form of SEA without using the name: for example, environmental appraisal (of land use plans), 'policy appraisal and the environment' (policies) and sustainability appraisal (regional land use and economic strategies). When it came to implementing the SEA Directive this approach created something of a rod for the government's own back. Very particular implementation challenges are now faced by the UK since it needs to reconcile the directive with its own existing weaker and broader appraisal systems.

Having finally agreed to the SEA Directive (with some in government initially believing existing systems would meet the directive's requirement), it soon became apparent that the directive would be more far reaching than expected. Environmentalists had succeeded in strengthening key aspects (see Sheate, 2003a) and would inevitably push hard for effective implementation. While the Office of the Deputy Prime Minister (ODPM, in charge of land use planning) was the lead department in examining implementation, the fragmented practice of strategic assessment across government departments and agencies, and the devolved administrations in Scotland and Wales, has meant continuing uncertainty as to what implementing legislation would look like. While the EIA Directive had been implemented through a vast raft of secondary regulations, this could be very cumbersome for plans and programmes as well.

The UK has decided therefore to use one overarching regulation under the European Communities Act 1972 to apply across all sectors in England, with separate sets of regulations also for Scotland, Wales and Northern Ireland (i.e four sets of regulations in total). The Scottish Executive, in contrast, intends to go beyond the scope of the SEA Directive and introduce SEA in a two-stage process. This will involve establishing regulations to meet the requirements of the directive, which will subsequently be revoked by a comprehensive bill on SEA, which will apply it to a wider range of public sector strategies, plans and programmes than the directive requires (Scottish Executive, 2003a). The UK Government intends consulting on a draft of the England regulation early in 2004.

Plans and Programmes to Which the Directive will Apply

During negotiations on the development of the SEA Directive there was considerable debate over the scope of application (Sheate, 2003a). Figure 1 provides a systematic approach for determining whether the SEA Directive applies to a particular plan or programme. The challenge for the UK and other member states in implementing the directive is firstly to establish those strategic initiatives that constitute a 'plan or programme' for the purposes of the SEA Directive.[1] The fact that the directive applies to administrative as well as legislative and regulatory provisions suggests that it may apply to a wide range of non-statutory plans and programmes should these be considered to set the framework for subsequent projects. Second, of those plans and programmes prepared for the sectors listed, member states must establish whether or not they 'set the framework for' the future development consent of projects requiring Environmental Impact Assessment (EIA) under the 'EIA Directive'.[2] Crucially, the SEA Directive does not appear to constrain SEA to those plans and programmes that set the framework for their 'respective' projects (i.e. in a vertical hierarchy). It would seem therefore that a transport or a water resource plan in some circumstances may be deemed to set the framework for a development project such as housing. The European Commission's guidance on implementing the SEA Directive recognizes that the EIA Directive was seen by the European Court of Justice (ECJ) in C-72/95 *Kraaijeveld* to have wide scope and a broad purpose, and suggests that a similar approach should be adopted by member states for the SEA Directive (CEC, 2003, para. 3.4). There is some uncertainty in the UK as to what will come within 'administrative provisions'. It may be that in order to avoid the risk of challenge some authorities will take a pragmatic approach and choose to carry out SEA as a precautionary measure to avoid later challenge in cases where they are uncertain that SEA is required.

There are certain UK plans and programmes to which it is almost certain the SEA Directive will apply; principally those in the land use planning and infrastructure sectors included in Table 1.

The SEA Directive makes special provision for those plans and programmes that are prepared for sectors other than those specified and that do not set the framework for projects requiring EIA, or require Appropriate Assessment under the Habitats Directive. Article 3(4) provides a far-reaching 'catch-all' for applying SEA to any plans and programmes, over and above those defined:

> Member states shall determine whether plans and programmes, other than those referred to in paragraph 2, which set the framework for future development consent of projects, are likely to have significant environmental effects.

The plans and programmes to which this article applies are therefore all those that set the framework for future development consent of projects even if not listed in the directive (Art. 3(2)). This includes *sectors* not already listed as well as future *projects* undertaken for those sectors but that are not covered by the EIA Directive (CEC, 2003). Determining the significance of environmental effects for plans and programmes under Article 3(4) can be undertaken on a case-by-case basis or by specifying types of plan and programme, or a combination of both (as is the case with the EIA Directive). Annex II provides a series of

[1] Plans and programmes '... which are subject to preparation and/or adoption by an authority at national, regional or local level or which are prepared by an authority for adoption, through a legislative procedure by Parliament or Government, and – which are required by legislative, regulatory or administrative provisions' (Art. 2a).

[2] Plans and programmes '... which are prepared for agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use and – which set the framework for future development consent of projects listed in Annexes I and II to Directive 85/337/EEC' (Art. 3(2)).

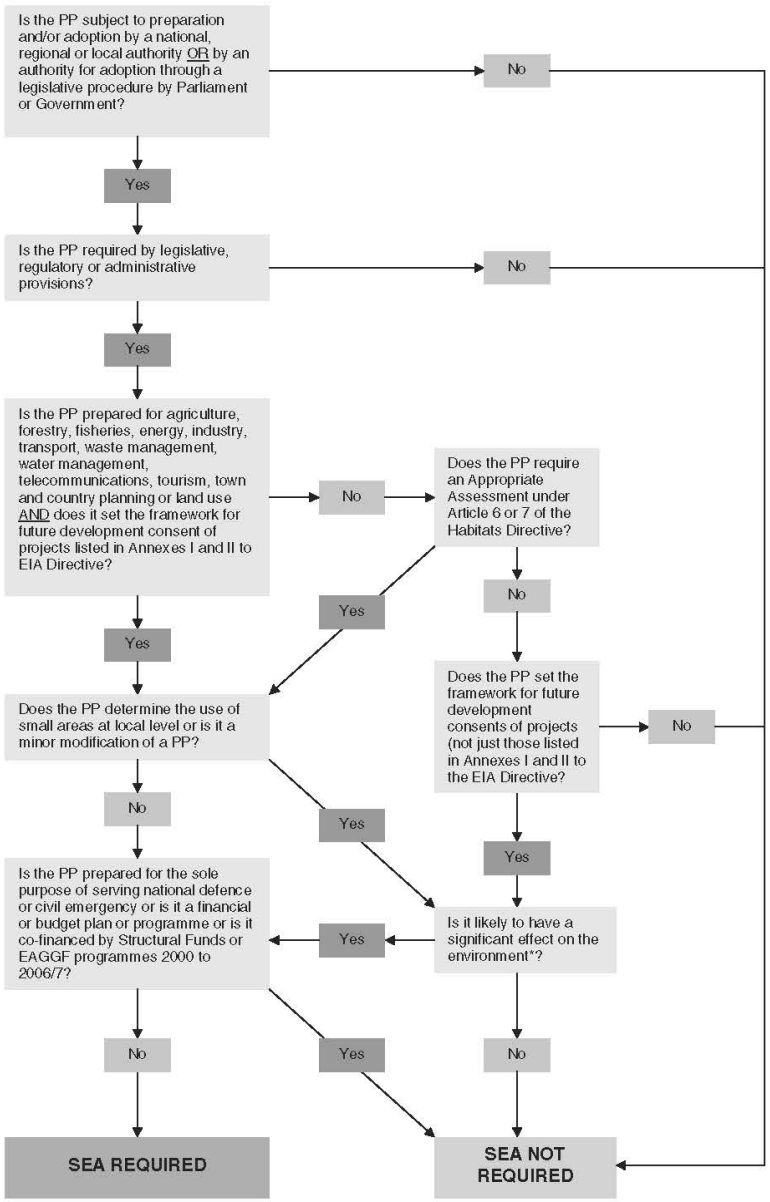

Figure 1. Plans and programmes (PPs) to which the SEA Directive applies (adapted from ODPM, 2003a)

Table 1. Examples of plans and programmes to which SEA Directive is likely to apply

Land use planning	• *Regional Planning Guidance (RPG)* prepared by Regional Planning Bodies (RPBs), to be replaced by *Regional Spatial Strategies (RSSs)* under the Planning and Compulsory Purchase Bill • *Regional Economic Strategies (RESs)* produced by Regional Development Agencies • *Development plans (Structure Plans, Unitary Development Plans, Local Plans)*, to be replaced by *Local Development Frameworks* under the Planning and Compulsory Purchase Bill • *Waste Plans, Minerals Plans* prepared by local authorities
Transport	• *Regional Transport Strategies* (part of RPG) • *Local Transport Plans* prepared by local authorities (either individually or in partnership)
Water sector	• *River Basin Management Plan 'Programme of Measures'* – the Water Framework Directive (WFD) introduces a requirement to produce a River Basin Management Plan and Programme of Measures to co-ordinate water-quality related measures within each river basin district • *National and Regional Water Resource Strategies*, prepared by the Environment Agency in England and Wales
Energy sector	• *Programmes for power generation* • *Construction or expansion of distribution networks* • *Offshore oil and gas licensing rounds*

criteria to be taken into account when deciding whether or not a given plan or programme has significant environmental effects.

A key issue relates to Appropriate Assessment under the Habitats Directive. Article 3(2)(b) provides that plans and programmes that require Appropriate Assessment under the EU Habitats Directive (92/43/EEC) – certain plans likely to have significant effects on Natura 2000 sites (Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Birds Directive (79/409/EEC)) or on proposed SACs – automatically require SEA. This provision will raise interesting questions in the UK, where government policy has been that development plans do not require appropriate assessment 'since the plan itself cannot authorize development that would affect the [Natura 2000] site' (DoE, 1994, p. 12). However, recently strategic appropriate assessments have started to be considered for certain other strategic plans such as flood defence. Given the wording of the SEA Directive, it seems extremely unlikely that the UK Government will be able to maintain their current position on development plans (and therefore by analogy for other strategic plans) after implementation of the SEA Directive.

The Provision of Support for Implementation

During 2003 various government departments, government agencies and NGOs commissioned consultants to prepare guidance documents on implementing the SEA Directive in various sectors:

- in October 2003, the ODPM published *The Strategic Environmental Assessment Directive: Guidance for Planning Authorities* (ODPM, 2003a);
- in August 2003 the Scottish Executive published *Environmental Assessment of Development Plans: Interim Guidance* (Scottish Executive, 2003b);
- the Department for Transport (DfT) has commissioned practical guidance on applying the SEA Directive to Local Transport Plans (LTPs) (DfT, 2004);
- the Environment Agency of England and Wales has commissioned general guidance on the SEA Directive;
- English Nature, the Environment Agency, the Countryside Council for Wales and the Royal

Society for the Protection of Birds have commissioned guidance on the treatment of biodiversity considerations in SEA and
- ODPM has commissioned guidance on undertaking sustainability appraisal of Local Development Frameworks and Regional Spatial Strategies (incorporating the requirements of the SEA Directive).

Various training events have been held, for example by the EIA Centre at the University of Manchester and Oxford Brookes University, with a wide range of training likely to be offered by various organizations in 2004 in the lead-up to implementation. A key challenge for implementation in practice will be in providing guidance and training appropriate to different sectors, which have their own different traditions, expertise and experience (or not) of strategic forms of assessment. The following sections therefore examine the extent to which three key sectors are prepared for implementation of the SEA Directive in July 2004.

SEA AND LAND USE PLANNING

In 1992, the government published *Planning Policy Guidance Note 12: Development Plans and Regional Planning* (DoE, 1992) and this emphasized the need for planning authorities to consider the environmental implications of their land use development plans. In response, a number of pioneering local authorities began to roll out 'environmental appraisals' of their development plans. Although environmental appraisal became relatively commonplace, successive surveys revealed various shortcomings in practice, particularly a failure to assemble and utilize baseline information and consider alternatives (Thérivel, 1998; Russell, 1999). In relation to traditional models of SEA, environmental appraisal has thus been variously described as 'less comprehensive and onerous' (Thérivel, 1998); 'less detailed' (Russell, 1999) and simply 'informal' (Glasson and Gosling, 2001).

In recent years, environmental appraisal has increasingly given way to sustainability appraisal, which focuses on the economic and social impacts of development plans as well as their environmental repercussions (Thérivel, 1998; Thérivel and Minas, 2002). Sustainability appraisal is now mandatory for Regional Planning Guidance (RPG) (DETR, 1999a) and recommended for development plans (DETR, 2000a). The government published a *Good Practice Guide on Sustainability Appraisal of Regional Planning Guidance* in late 2000 (DETR, 2000b). The adoption of the SEA Directive raises the important question of whether or not the requirements of the directive should be incorporated into a wider sustainability appraisal process for RPG as well as local authority development plans (Smith and Sheate, 2001a) (and the plans that will succeed them – see below). This question raises procedural and substantive concerns. On the procedural side, a survey of sustainability appraisal practice as it applied to RPG and RESs revealed that the majority of sustainability appraisals had been initiated once a draft plan had been prepared and they had, with a few honourable exceptions, failed to assemble and utilize baseline information or consider alternatives (both central tenets of the SEA Directive) (Smith and Sheate, 2001b). On the substantive side, the question highlights a need to debate the relative merits of SEA and sustainability appraisal as tools for promoting sustainable development.

Kørnøv and Thissen (2000) considered SEA an *advocative* approach in that it seeks to raise the profile of environmental considerations in decision-making. Sustainability appraisal, in contrast, represents an *integrated* approach in that it aims to support the decision-making process with respect to all aspects of sustainable development and therefore remains ostensibly neutral with respect to the interests at stake. Arguably, the promotion of sustainability appraisal over SEA therefore risks the loss of SEA's environmental advocacy role. Owens and Cowell (2001, 2002) argued that SEA's potential call for radical modifications to conventional development trajectories is behind its slow and hesitant introduction and,

moreover, why governments have moved to 'neutralize' its potential by introducing sustainability appraisal in its place.

However, the issue of SEA's advocacy role warrants further attention. To begin with, if SEA is merely concerned with assembling and presenting strategy-makers with information on environmental impacts in order to facilitate more informed decision-making, then where is the danger in assembling information on social and economic impacts to present alongside this? Surely this could only promote sounder decision-making and therefore be of benefit to sustainable development? However, in assembling information on social and economic impacts, some might argue that this effectively constitutes 'double counting', since, in all likelihood, the priorities of the strategy in question will lie in the advancement of social and particularly economic goals and the impacts on these will therefore be considered as a matter of necessity. The danger with 'double counting' and therefore sustainability appraisal is that the provision of social and (more particularly) economic information could serve to 'reinforce' the decisions made in developing the strategy and consequently lead to environmental concerns being sidelined. Indeed, the UK Royal Commission on Environmental Pollution (RCEP) has voiced concern that 'sustainability appraisal can in fact marginalize the very environmental and social appraisals that it is supposed to bolster as a counterpoint to dominant financial and economic assessments' (RCEP, 2002, p. 98).

From a procedural perspective, the transition from SEA to sustainability appraisal is accompanied by a danger that, given limited planning authority resources (e.g. money and staff time), environmental considerations will not be subject to the same level of investigation in sustainability appraisal as they would have been under a regime of SEA. In other words, there is a risk that depth of impact investigation will be sacrificed for breadth of coverage unless greater resources are provided for undertaking sustainability appraisal than would have been the case for SEA. In addition, past sustainability appraisal practice has fallen far short of the requirements of the SEA Directive. Research based on three case study regions – Yorkshire and the Humber, the South East and the North West – revealed that past sustainability appraisal practice as it applied to RPG and RESs had largely failed to comply with the key requirements of the SEA Directive, i.e. undertake scoping; establish the baseline; consider alternatives; involve stakeholders; subject the appraisal report to public consultation; introduce quality assurance measures and consider monitoring arrangements (Smith, unpublished PhD thesis). In light of these research findings it is evident that future sustainability appraisal processes will have to improve dramatically if they are to comply with the requirements of the SEA Directive. Further, the danger inherent in sustainability appraisal is that certain environmental impacts may not be perceived as significant in comparison to particular economic and social impacts and may not therefore enjoy explicit recognition in the appraisal's recommendations. Trade-offs between economic, social and environmental issues may therefore be made as part of the sustainability appraisal process rather than the decision-making process. In contrast, in SEA, the recommendations to decision-makers made on the basis of the assessment are inevitably more likely to focus on the way in which environmental impacts can be avoided or mitigated (and are therefore likely to be more 'clear cut').

Although the debate over the relative merits of SEA and sustainability appraisal is an important one (Sheate, 2003b), it may be somewhat academic in the UK, at least in the context of regional and local planning, in light of recent government pronouncements. The government intend that sustainability appraisal and SEA requirements for the planning system should be capable of being handled in one assessment process, and intends to issue further guidance in Spring 2004 explaining how such joint assessment should be carried out. It is important to note that the

Box 1. Proposed changes to the planning system in England

The Planning and Compulsory Purchase Bill (PCPB) – introduced in Parliament in late 2002 – aims to speed up the planning system and proposes several changes at the regional and local levels in England. In particular, the PCPB proposes replacing RPG with statutory Regional Spatial Strategies (RSSs) and replacing the current system of local development plans – Structure Plans, Unitary Department Plans and Local Plans – with Local Development Frameworks (LDFs). The latter will comprise a series of Local Development Documents (LDDs). Several types of LDDs are proposed including Development Plan Documents (DPDs), Non-DPD LDDs to be termed Supplementary Planning Document (SPDs) and a Statement of Community Involvement (SIC). The PCPB proposes that sustainability appraisal will be required for RSSs and *each* LDD produced. However, whilst all LDDs will be subject to sustainability appraisal, not all will necessarily require SEA (ODPM, 2003b). Individual LDDs could be prepared and amended separately and at different times or together at the same time. In light of the fact that different LDDs will have different status, different focuses and be produced at different times, the sustainability appraisal process applied to them will have to be relatively flexible in its approach.

planning system is set to undergo a series of fundamental changes, which are outlined in Box 1, and these could have implications for the way in which future sustainability appraisals are undertaken. For example, Regional Spatial Strategies (RSSs) are anticipated to contain sections addressing particular sub-regional issues. In providing this sub-regional detail, Regional Planning Bodies (RPBs) will look to the county and unitary authorities to take the lead in convening the necessary sub-regional working groups with the district and other stakeholders. To ensure that the outputs from these working groups are consistent with sustainable development principles, it may be necessary for each working group to initiate a sustainability appraisal process (as opposed to the current situation, where RPBs undertake a single sustainability appraisal of emerging RPG).

Government guidance on preparing the new Development Plan Documents emphasizes the importance of the 'pre-production and survey' phase in which local planning authorities 'will need to collect the necessary data to develop a robust evidence base for the plan and provide the baseline for SA/SEA' (ODPM, 2003b). The 'production' phase involves developing the vision, objectives and spatial options for the plan through the SA/SEA process and stakeholder consultation. Government guidance therefore emphasizes the assembly of baseline information and the consideration of alternatives – two components of sustainability appraisal largely missing to date and two key requirements of the SEA Directive. The guidance also states that appraisals must give equal weight to social, economic and environmental factors and be steered by groups with broad memberships extending beyond authorities, including amenity societies, community organizations and commercial representatives. This new government guidance suggests that many of the steps necessary to improve sustainability appraisal practice and bring it into line with the requirements of the SEA Directive – particularly the assembly of baseline information, the consideration of alternatives and the involvement of stakeholders – have been recognized and are now being promoted.

Implementation of the SEA Directive at the same time as radical planning reforms

in England (discussed above) raises the interesting conundrum – to what extent will any potentially unsustainable development options be already enshrined in plans and can they subsequently be challenged through the SEA process? In February 2003, the UK Government launched its *Sustainable Communities Plan* (ODPM, 2003c) that includes proposals to provide for up to 200 000 houses, in addition to the 900 000 already planned for the south east of England up to 2016. These will be built in four 'growth areas' – Thames Gateway (east of London), Ashford, Milton Keynes and South Midlands, and the London–Stansted–Cambridge (M11) corridor.

As government policy, the *Communities Plan* has not been subject to SEA, yet it has established a significant policy commitment that the government expects to be delivered by subsequent tiers of plans. Growth studies of the individual growth areas currently being carried out predate implementation of the SEA Directive. For example, the study for the Milton Keynes and South Midlands Growth Area has been subject to a Sustainability Appraisal (GOEM, 2003), but this is not as rigorous as that which would be required by the SEA Directive. The outputs of this study will be incorporated into the East Midlands RPG/RSS, with the result that this 'plan' will contain major housing proposals that have not been subject to rigorous assessment.

When Local Development Documents, which will be charged with trying to deliver the housing growth, are subsequently produced (from mid-2004, after the SEA Directive has been implemented), rigorous SEA/SA will be required. Will the housing proposals in the growth areas be challengeable, for example on the grounds that all 'reasonable alternatives' have not been considered, or that other options not previously considered may be 'reasonable' and indeed preferable? If, after SEA/SA, local planning authorities decide not to incorporate the required number of houses in their LDDs because they are 'unsustainable' or will breach environmental limits, will this be acceptable? The uncertain nature of the process and the lack of adequate SEA of the higher-level policies and plans could result in long delays and conflicts between regional and central government and local government.

The experience of the land use planning sector raises a number of interesting issues for implementation of the SEA Directive (see Box 2), which are discussed further below.

Box 2. Key issues relating to the land use planning sector

- ❑ The relationship between SEA and sustainability appraisal and the relative merits of these as tools for promoting sustainable development.
- ❑ The failure of past sustainability appraisals to assemble and utilise baseline information and consider alternatives.
- ❑ The danger that environmental impacts may not be subject to the same level of exploration in sustainability appraisal as they might have been under a regime of SEA.
- ❑ The objectives-led approach of sustainability appraisal versus the baseline-led approach of the SEA Directive.
- ❑ The range of alternatives likely to be considered 'reasonable' within the requirements of the Directive.
- ❑ Assessment of cumulative effects at strategic level. The ODPM guidance (2003) on implementing the SEA Directive provides only limited and somewhat confusing guidance on cumulative effects assessment (CEA), which will require further clarification of definitions of direct, indirect and cumulative effects.

SEA IN THE WATER SECTOR

The water sector in the UK historically has had a tradition of strategic planning through integrated river basin management (Byron and Sheate, 1997) and it is likely that the SEA Directive will impinge upon a wide range of plans and programmes within the sector.

The Water Framework Directive (2000/60/EC) (WFD) introduces a Programme of Measures (PoM) and a River Basin Management Plan (RBMP) to co-ordinate water quality-related measures within each river basin. According to the Commission guidance (CEC, 2003), it is not possible to state categorically whether or not the RBMP and the PoM are within the scope of the SEA Directive. Such an assessment should be made on a case-by-case basis and the usual tests in Articles 2 and 3 of the SEA Directive will need to be applied in each case. Since the RBMP and the PoM are both required by the WFD and have to be prepared by authorities, the main question is whether they set the framework for the future development consent of projects. The Environment Agency (for England and Wales), has commissioned research on the relationship between the WFD and SEA Directives, which has yet to report.

In the UK, National and Regional Water Resource Strategies, produced by the Environment Agency, set the policy context in which future project decisions will be taken by water companies, e.g. new reservoirs, water abstraction and water transfer schemes, all of which will be subject to the EIA Directive. The Environment Agency is only a consultee in the development consent process for such projects, but it *is* the licensing authority for abstractions and discharges and has a duty to ensure adequate distribution of water resources. Water companies, therefore, are unlikely to come forward with water resource schemes that have no chance of licensing by the Environment Agency. Indeed, the Commission guidance (referring to case C-188/89 *Foster and others v British Gas*) suggests that privatized utility companies may also be required to undertake SEA where they undertake long-term planning, e.g. for water resources, where under non-privatized regimes such plans would be carried out by authorities (CEC, 2003, para. 3.12). By their nature, water resource strategies could result in significant effects on the environment, e.g. by promoting groundwater abstraction or new reservoirs, so water resource strategies would appear to set the framework for future development consent of projects under the EIA Directive, albeit indirectly.[3] Indeed, that is the key purpose behind the strategies' development and forms of SEA have already been applied by the Agency (Environment Agency, 2001) in *Water Resources for the Future: a Strategy for England and Wales*. This follows a much earlier pioneering attempt at SEA by the predecessor to the Environment Agency, the National Rivers Authority in 1994 (NRA, 1994). The intention has always been to provide a strategic environmental context within which water company investment decisions come forward, and therefore any applications for subsequent development projects. The Agency and the UK Government have yet to finalize the list of Agency strategies to which the SEA Directive is likely to apply, and this is the subject of considerable internal debate. Other Agency plans that are likely to come under the SEA Directive include Catchment Flood Management Plans (CFMPs), Shoreline Management Plans and Flood Defence Strategies.

The privatized water companies in the UK may also come under the SEA Directive. The European Commission guidance on implementation (CEC, 2003) recognizes that privatized utilities often have statutory responsibilities to undertake strategic planning that if they were carried out by a public authority would otherwise be subject to the SEA Directive. In such circumstances it is expected that water

[3] At para. 3.23 of the guidance the Commission recognizes that 'setting the framework' may be indirect, e.g. the plan or programme contains criteria or conditions that guide the way the consenting authority decides an application for development consent (for projects under the EIA Directive), such as placing limits on the type or extent of activity.

Box 3. Example of SEA and water resource planning

SEA and Water Resources in the Thames Region
(Thames Water, 2000)

A form of SEA – termed in this case Best Practicable Environmental Programme (BPEP) – was undertaken for Thames Water by Land Use Consultants (LUC), Consultants in Environmental Sciences (CES) and others over a three-year period from 1997–2000. The study aimed to quantify future demand for water and to identify and assess how such demand could be managed or met. The results informed the water company's Water Resources Plan, submitted every five years to the Environment Agency, and the Strategic Business Plan submitted every five years to the economic regulator, the Office of Water Services (OFWAT).

A wide range of possible generic options was identified, comprising strategic, regional, demand management and innovative schemes. Examples were new reservoirs, groundwater development, artificial recharge and recovery from aquifers, desalination, import of water from afar (e.g. Norway, Scotland), water reuse schemes, and water transfers. The options were assessed using a multi-criteria evaluation method, comparing technical practicability, cost, and impacts on the aquatic and terrestrial environment. This providing a ranking of options against the main categories of criteria, informing future planning and decisions about which options performed better or worse for some or all of the criteria. A key element of the BPEP process was public involvement and consultation over scoping and the assessment methodology employed. Some options performed better than might have been imagined, e.g. desalination, which only ten years previously would not have been considered. In 2003 Thames Water announced that it was proposing a desalination plant at Beckton in East London, to help meet increasing demand from increased house building in south east England (The Guardian, 27 October 2003).

companies will be required to undertake SEA, e.g. in developing their own water resource strategies or strategic sewage treatment options. In practice, this is unlikely to create a huge burden on water companies, since many are already undertaking voluntary SEA, e.g. Thames Water on its future water resource options for the South East of England (Thames Water, 2000) (see Box 3). In many cases the need for a public strategic process has arisen where controversial schemes might be required, e.g. new reservoirs, and this has encouraged the water companies to adopt voluntary SEA.

The relationship between different levels of plans, of course, introduces the concept of tiering, traditionally seen as a vertical hierarchy, but tiering under the SEA Directive would not necessarily appear to have to be such a direct relationship, e.g. a water resource strategy might set the framework indirectly (in terms of water availability) for subsequent decisions on housing development. A question concerning the Environment Agency and its sponsoring department the Department for Environment, Food and Rural Affairs (DEFRA) is how the SEA Directive will impinge on local or specific plans or strategies, e.g. Catchment Abstraction Management Strategies (CAMS), which set the framework for decisions about abstraction licensing at the local (sub-regional) level. In the case of CAMS, the Environment Agency has already developed its own elaborate Sustainability Appraisal (SA) guidance for CAMS (Environment Agency, 2002),

Box 4. Key issues emerging from the water sector

- ❑ Strong stategic integrated river basin management framework already exists in the UK water sector.
- ❑ Long-standing experience in the UK of applying environment assessments at varying levels of decision-making throughout the water sector.
- ❑ The relationship between the SEA Directive and the WFD will be an evolving one, though since the WFD reinforces a river basin management approach the UK should be better placed than some to implement it.
- ❑ How far down the hierarchy of water resource management plans and programmes the SEA Directive will apply has yet to be determined.
- ❑ Privatised water companies are likely to be affected by the SEA Directive and may be required to apply SEA to their own strategic plans.
- ❑ Extent to which water related plans and programmes might set the framework indirectly for other, non-water, development projects.
- ❑ Relative merits of SEA and SA in the water sector.

and, therefore, if SA is seen internally as appropriate for CAMS it would seem inconsistent to suggest that SEA was not also appropriate. CAMS clearly set constraints on (and therefore the framework for) subsequent projects, not just abstractions (which may or may not come under the EIA Directive), but also other forms of development, such as housing, industry etc. Either SEA or SA has been applied already to water resource plans and strategies at all levels voluntarily by the Agency. The argument over which plans should come under the SEA Directive therefore seems rather redundant and would appear to be more about how to minimize the assessment requirement rather than ensure the SEA Directive is applied to those plans and programmes where it is most needed. At the very least, any plan or strategy that already has a form of SEA or SA applied to it should be subject to the SEA Directive, since almost by definition the current SEA or SA is being undertaken for the reason of assessing the environment effects of strategic options that are likely to affect individual projects coming forward at a later stage.

Box 4 provides a summary of some of the key issues for implementation emerging from the water sector's experience of SEA to date.

SEA IN THE ENERGY SECTOR

Which Plans and Programmes?

'Energy' is one of the sectors explicitly mentioned in the directive. Therefore, 'plans and programmes' (fulfilling the criteria set out in Article 2(a)[4] 'which set the framework for future development consent' for types of project that require EIA will require mandatory SEA (Article 3(2)(a)). Both Annexes I and II of the EIA Directive include 'energy projects'; e.g., Annex I paragraph 2 includes 'thermal power stations and other combustion installations with a heat output of 300 megawatts or more and nuclear power stations and other nuclear reactors' and Annex II paragraph 3, which deals specifically with the energy industry, hydroelectric installations and wind farms. Other energy sector plans and programmes may also be determined to require SEA because 'they are likely to have significant environmental effects' (Article 3(4)).

In the UK, electricity generation, transmission and supply are privatized. However,

[4]That they are prepared and/or adopted by an *authority*, or prepared by an authority for adoption by Parliament/Government, and which are *required* by legislative, regulatory or administrative provisions.

given the European Commission guidance (CEC, 2003), it seems likely that (as in the water sector) privatized energy companies may need to carry out SEAs for some of their plans and programmes. The government has yet to indicate which energy sector plans and programmes they believe will be subject to the directive. Initial work by the UK Government (DTLR, 2002) identified generic types of energy plan and programme that might be subject to SEA (including those of regulated utilities formerly in the public sector):

- programmes for power generation above the level of individual projects (fossil, nuclear and renewable generation – wind, wave and solar power will not be excluded on the grounds that they are more environment friendly)
- construction or expansion of distribution networks
- offshore oil and gas licensing rounds.

Although many energy plans and programmes are produced in the UK, few are formally required (South West Regional Assembly, 2002). Preliminary analysis suggests that Home Energy Conservation Act reports could be subject to the directive (South West Regional Assembly, 2002), as could Seven-Year Statements for electricity transmission (Marshall, 2003a). Manchester University EIA Centre is currently undertaking more detailed research on which UK electricity sector plans and programmes might be subject to the directive for Scottish Power (R. Marshall, personal communication). In comparison with land use planning and the water management sectors, the UK energy sector has little history of SEA (Byron and Sheate, 1997). However, driven by the forthcoming implementation of the SEA Directive, there have been some recent SEA initiatives. These have been principally by central government offshore (discussed below), but also by government and private utility companies onshore. For example, Scottish Power[5] has been examining the potential role for SEA in regional transmission planning (Marshall, 2003b). Other work includes Sustainability Appraisals of the Strategic Framework for the Strategy for the Development of Renewable Energy in the South West (South West Regional Assembly, 2003) and of the Regional Strategy for Energy Efficiency and Renewable Energy (South East of England Regional Assembly, 2002). These regional renewable energy strategies are required to implement the government's national renewable energy target of 10% of electricity from renewables by 2010 and 20% by 2020 (UK Government, 2003).

It seems unlikely that the SEA Directive will resolve problems surrounding those programmes/projects where there have been issues over project definition under the EIA Directive, i.e. whether a project is a project or a programme. Under the privatized electricity regime new proposed schemes can come forward in a very ad hoc, speculative manner. In the case of the Wilton power station in North East England in the early 1990s, for example, an EIA was carried out and consent subsequently granted, but without taking into account some key aspects of the 'project' (Sheate, 1996). The environmental impact statement had made clear that the power station was only one part of the 'project' and that other component 'projects' would be subject to separate EIAs (after the main power station consent was granted) under various separate consent processes. This included 90 km of 400 kV power line upgrades, a gas pipeline and a combined heat and power pipeline. In this case the power station project is more strategic than just a single project – it is more like a programme, and sets the framework for the power line upgrades, gas pipeline etc. (they would not be needed otherwise), but it is not coming forward as part of a strategic planning framework. In a tiered system it seems reasonable to expect SEA to provide the solution to this problem. However, for many power stations it is not possible to point to a specific strategic process that would set the

[5] One of three companies in the UK licensed to develop and maintain a transmission system for electricity supply.

framework. Consequently, there may be no adequate mechanism for making the assessment happen when widely different consent processes are involved in a 'collection of projects'. It looks as though the SEA Directive therefore will not address this problem and there is likely to be a continuing loophole between EIA and SEA.

Offshore Oil and Gas

Although under no legal obligation to do so in advance of implementation of the SEA Directive, in 2000 the UK Department of Trade and Industry (dti) made a policy commitment to undertake SEAs to inform their decisions on which blocks to offer for license in all future offshore oil and gas licensing rounds. Exploration and production in the UK oil and gas industry is regulated primarily through a licensing system. In summary, the process involves a decision by dti on which offshore areas (blocks) should potentially be made available for license at a particular time. These are then advertised so interested parties can apply for licenses. Once applications are received a round (batch) of licenses is granted.

At the time of writing, three SEAs have been carried out – of the former White Zone (dti, 2001a), mature areas of the Offshore North Sea (dti, 2001b) (which was subsequently extended (dti, 2002a)), and part of the Central and Southern North Sea (dti, 2002b). A fourth SEA (of the area north and west of Orkney and Shetland) is currently out for consultation (dti, 2003a). Dti's ultimate aim is to have a series of eight SEAs covering the whole area of the UK continental shelf.[6] From a welcome but relatively cautious start with the first SEA, dti has showed a willingness to build on and refine the SEA process. The result is that the series of SEAs is being undertaken in line with the broad requirements of the SEA Directive and have influenced decision-making. For example, certain parts of the area covered by the second SEA were excluded from licensing so more information could be collected on features of biological interest that were discovered during data collection for the SEA (dti, 2002c). Further, dti are actively encouraging the emerging SEA process to evolve and build on experiences. Because of this positive approach, the SEAs incorporate many welcome features of good practice: for example, establishment of a stakeholder steering group to input into SEA planning, data collection, preparation and review, and a commitment to collection of new baseline data. There is also an emphasis on information provision and consultation: a dedicated dti SEA website[7] has been established on which all the SEA information is freely available and people can comment electronically; stakeholder meetings have been held to supplement written comments received via formal consultation on SEA reports and for the third and fourth SEAs a scoping leaflet was produced and distributed widely (dti, 2002d, 2003b) and a collation of the comments received during consultation on the SEA report published (dti, 2003c). There is much to support in the approaches adopted by dti, although there are still some areas where practice is likely to need development to comply with the requirements of the SEA Directive. These include the treatment of alternatives and cumulative effects, provision of post-decision information on how the SEA was taken into account, and monitoring (Byron, 2002). With dti's positive attitude the hope is that these issues too will be strengthened in future SEAs.

Offshore Wind Energy Generation

The dti recently carried out an SEA assessing the implications of licensing a second round[8] of offshore renewables (dti, 2003d). This assessment concentrated on three strategic areas (Greater Wash, Thames Estuary and Liverpool Bay).[9] The SEA process did include elements

[6]Map of the SEA areas available at http://www.offshore-sea.org.uk/sea/dev/media_file/all_SEAS_v4.pdf

[7]http://www.offshore-sea.org.uk/sea/index.php

[8]The first round proceeded in early 2001 without an SEA.

[9]See map at http://www.og.dti.gov.uk/offshore-wind sea/process/regions.htm

of good practice such as establishment of a stakeholder steering group and SEA website.[10] However, there were weaknesses – notably, the very tight timescale set for production of the SEA resulted in a lack of information available to inform the process (including environmental data gaps and knowledge of windfarm impacts). In particular, the lack of the information necessary to designate, and actual designation of, the full complement of marine protected areas within the Natura 2000 network severely hampered the certainty with which potential constraints to development could be assessed (RSPB, 2003). There was also a relatively short consultation period (four weeks) on the SEA report. At the time of writing, the announcement of the second round of licences is imminent. There have to be some questions about the SEA's capacity to inform decision-making given that it failed to set out clear options for the strategic approach dti should adopt for licensing. However, the SEA has resulted in identification of a coastal buffer area that will not be licensed (at least in the current round) because of the current lack of information about potential impacts on the environmental sensitivities in this shallow water (dti, 2003e), which is a welcome move.

Future Offshore SEAs

Dti has now decided to combine the SEA processes for both offshore oil and gas and offshore renewables. The initially distinct stakeholder steering groups have been merged and the intention is that the next SEA (of part of the North Sea East of Scotland, Orkney and Shetland, due to be published in Autumn 2004) will consider both offshore oil and gas licensing and offshore renewables licensing (K. O'Carroll, personal communication). It will be interesting to see how the issue of alternatives is handled in such a joint SEA. Certainly, dti will be well placed to approach directive implementation for the plans and programmes in their remit. Furthermore, their experiences and good practice elements will be useful for other sectors in adapting existing practice/preparing for directive implementation. See Box 5 for a summary of a number of interesting issues for implementation of the SEA Directive raised by the experience of SEA in the energy sector to date.

[10] http://www.og.dti.gov.uk/offshore-wind-sea

DISCUSSION

The above review of current developments in the UK in preparation for the SEA Directive implementation in July 2004 highlights some interesting cross-sectoral and comparative issues which provide wider lessons for the EU as a whole.

Clearly, there is an urgent need to identify (or establish a means to identify) those UK plans or programmes that will be subject to the SEA Directive. Given the uncertainty over various legal aspects of the directive's scope (particularly what constitutes an 'administrative provision'), the different sectors and the relevant proponent bodies face a dilemma of either imposing a blanket requirement for SEA for certain plans and programmes (and thus avoiding the possibility of later legal challenge) or assessing the directive's applicability on a case-by-case basis (and thus risking expending what they may view as unnecessary resources). From an environmental point of view, it may be beneficial to adopt a precautionary approach and apply the SEA Directive in all cases where there is doubt as to its applicability.

The three sectors discussed above – land use planning, water and energy – raise particular issues regarding implementation. In the land use planning sector, the key issues include the relationship between SEA and sustainability appraisal (SA) and the implications of this relationship for environmental protection and sustainable development. A further issue is the fundamental planning reforms in train and the implications of these for the

Box 5. Key issues relating to the energy sector

- ❑ Offshore SEAs carried out in advance of Directive implementation
- ❑ To date offshore *SEA* rather than Sustainability Appraisal
- ❑ Stakeholder steering group approach
- ❑ Data: commitment to data collection for oil and gas SEAs (at present it is not clear what amount of data is likely to be used in terrestrial, particularly 'planning', SEAs). Problems/lack of designated sites – for renewables SEA
- ❑ Contrast between mature (oil and gas) and fledgling (renewables) industries. The uncertainty about potential impacts in the latter made assessment extremely difficult
- ❑ SEA in the offshore energy sector an example of introducing what is effectively a form of strategic (spatial) planning in sectors with no/little history of this
- ❑ Potential application of the Directive to privatised utility company plans and programmes
- ❑ Potentially different SEA requirements for different parts of the UK because of different approaches to implementation in Scotland. What requirements will apply to matters for which decision-making is reserved to the UK level (e.g. offshore energy licensing)?
- ❑ 'Cross-sectoral' SEA – planned combined renewables and oil and gas SEAs
- ❑ Potential of SEA to help deliver 2003 Energy White Paper (dti, 2003f) commitment to put the environment at the heart of Government energy policy?

procedural aspects of SEA and SA. In particular, the preparation of a multitude of LDDs may necessitate a corresponding number of sustainability appraisals. In addition, past surveys of sustainability appraisal practice have revealed various shortcomings and there is a need for appraisal practice to improve dramatically to meet the requirements of the SEA Directive.

In the water sector SEA is already quite widespread, perhaps because water companies were already undertaking economic appraisals (Cost Benefit and Cost Effectiveness Analysis) as part of normal business practice, and so undertaking SEA alongside CBA was seen as beneficial to public relations and to authorization by regulators where major new resources, especially reservoirs, would prove controversial. The Environment Agency has in the past also been at the forefront of developing SEA, but increasingly has been developing integrated approaches in response to the government's preference for SA elsewhere, e.g. within regional land use planning (Eales *et al.*, submitted).

The long history of strategic planning in the water sector, which continued beyond privatization both within the environmental regulator (Environment Agency) and the privatized water utilities, is in marked contrast to the privatized electricity sector. Prior to privatization in 1990, the Central Electricity Generating Board did undertake strategic planning, but the introduction of a market in electricity generation and supply created widely separated consent processes outside a consistent strategic framework. The energy sector, then, provides an important contrast to land use planning and the water sector. Here the SEA Directive and the application of SEA in practice are acting as drivers for the introduction of what is effectively a new system of strategic planning where previously it has been lacking. This creates very real opportunities to consider alternative options more strategically, and for public and stakeholder involvement to take place much earlier in the decision-making and planning process. This should enable more environmentally acceptable options to be given serious consideration.

In addition to the sector specific issues outlined above, there are several generic issues that will confront SEA practitioners. These include issues surrounding data, uncertainty and the general trend towards sustainability appraisal.

Data

A key issue confronting all future SEA practice will be that of data. The SEA Directive's emphasis on the collection and presentation of baseline information will necessitate better monitoring systems and promote 'evidence-based' decision-making. In the land use planning sector, for example, it may be necessary to establish an annual system of state of the environment (area) reporting. This information could then be used to provide much of the baseline information needed for individual SEAs or SAs. The reporting system could be based on a number of indicators spanning economic, social and environmental concerns, the statuses of which were reported on an annual basis. Promotion of an evidence-based system of SA is essential to meet the requirements of the SEA Directive and combat past inadequacies in practice. For example, as one commentator observed, SAs are generally 'qualitative in style, relying on hunches and gut feeling' and 'are often based purely on the opinion of the appraisers' (Nicholson, 2002, p. 28).

Uncertainty

Of course, regardless of the level and quality of baseline information available, SEA practitioners will always have to contend with uncertainty. This arises from the fact that as the decision-making hierarchy is ascended (i.e. from projects to programmes, plans and policies), it becomes progressively more difficult to anticipate how strategic ambitions will manifest themselves on the ground. A plethora of variables can conspire to ensure that the policy ambitions set out in say a development plan may not be met in practice. SEA therefore tends to be based on assumptions: not least the assumption that the policy ambitions set out in a plan or programme will be met in full. This is exacerbated by the uncertainties caused by lack of appropriate level data to inform the process. One of the consequences of the lack of data has, perhaps, resulted in a preference for SA simply because it is conventionally easier to undertake with a low level of baseline information.

SEA Versus SA

The debate between SEA and SA in the land use planning sector is now less of an 'either/or' issue and more about how the two can be reconciled, since the UK Government has decided on the promotion of sustainability appraisal (albeit incorporating the requirements of the SEA Directive). One of the key issues in the debate over SEA or sustainability appraisal is the conception of sustainable development being pursued. Lee and Kirkpatrick (2000) argued that, because SEA tends to address the environmental issues associated with development in isolation from the social and economic implications, it may well be suited to testing for 'strong' (i.e. 'darker green' sustainability, where any encroachment on natural capital can render development unsustainable). In contrast, Lee and Kirkpatrick argued that 'weak' sustainability requires some form of integrated assessment so that environmental factors may be weighed against economic and social concerns. The oversimplification that is a feature of SA creates an inevitable risk that the environment is addressed less extensively and less transparently. Key aspects are too readily lost in reducing everything to a few broad objectives and where the integration of environmental, economic and social factors is frequently manifested as a 'balance' between the three dimensions.

CONCLUSIONS

The adoption and implementation of the SEA Directive, emerging as it did out of a strong

Table 2. Recommendations for implementation

Scope	• Early identification of/guidance on the plans and programmes that will be subject to the directive (by the authority responsible for implementation e.g. relevant central government department/ministry together with 'authorities' producing plans and programmes that may be caught) • As uncertainties are likely to remain as to whether certain plans and programmes are covered, promotion of a pragmatic approach advocating that in cases of doubt SEA should be carried out (by the implementing authority)
SEA versus SA	• Do not adopt an SA approach to implementation of the directive without a careful prior debate/examination of whether this will be an effective mechanism for ensuring better integration of environmental considerations into strategic decision-making • If an SA approach is adopted, ensure it incorporates sufficient safeguards to make sure that environmental considerations are given adequate emphasis in assessment/decision-making
Data	• Audit existing sources of data to assess their suitability for use in SEA • Coordinate existing data sources and ensure they are freely available for use in SEAs of plans and programmes across the range of sectors (State of the Environment reporting) • Accept that collection of new data is likely to be needed and coordinate that collection • Commission new research e.g. on issues where there is poor understanding of potential impacts (e.g. offshore wind farms, cumulative effects)
Culture change	• Use implementation of the SEA Directive as an opportunity to promote an increased emphasis on environmental considerations in strategic decision-making • Use implementation of the SEA Directive to promote consideration of a wider range of alternatives in strategic planning, particularly use of the alternatives hierarchy (which involves sequential consideration of the following: 'need or demand: is it necessary?'; 'mode or process: how should it be done?'; 'location: where should it go?' and timing and detailed implementation) • Use implementation of the SEA Directive to promote better linkages between strategic planning in different sectors (e.g. land use planning and water)
Support for implementation	• Provide training for all those who will be involved in SEA (decision-makers, environmental authorities, consultants, stakeholders) • Coordinate training provision to ensure coherence and quality • Produce guidance on the requirements of the SEA Directive at an early stage
Policy appraisal	• Introduce/strengthen existing systems of policy appraisal by government and authorities (SEAs are likely to highlight the lack of SEA in higher tiers of decision-making)

historical environmental integration philosophy, provides an important counterpoint to the continued weakening of the conception of sustainable development elsewhere in EU policy, e.g. within the EU Sustainable Development Strategy (Sheate, 2003b). The potential breadth of application of the SEA Directive – if interpreted as having a wide scope and a broad purpose – could have significant implications in terms of changes to practice and need for allocation of resources, and also by having a very real impact in improving the integration of the environment into strategic decision-making. However, the application of SEA to plans and programmes will inevitably expose the lack of SEA at the policy level, just as the EIA Directive exposed the lack of SEA at programme and plan levels (Sheate *et al.*, 2003). The use of sustainability appraisal at the policy level in some sectors, by contrast, could create some dissonance with plans and programmes where SEA is to be applied to alternative options that have been constrained by sustainable development compromises made at the higher policy level (e.g. in relation to housing provision).

Key challenges remain in terms of appropriate levels of resources and trained staff to undertake the new demands of the SEA Directive. Consequently, further training will be essential, especially in relation to baseline information, alternatives, cumulative effects and public participation at strategic levels. The promotion of state of the area reporting in the

UK run by local authorities and statutory agencies and others will go a long way to providing the baseline information necessary for SEA. If local authorities have to deal with a large number of SEAs of different plans and programmes it will make real sense (and doubtless be cost effective) to have an established monitoring and reporting framework in place. This will link in closely with the monitoring requirements of the SEA Directive (Art. 10) and with the emphasis explicit within the directive for tiering and avoidance of duplication (Art. 4(3)).

Finally, a series of recommendations that may be helpful to guide implementation across the EU drawn from the UK approach are set out in Table 2.

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Appendix 13

SHEATE, W. R. and Leinster, T, (2005) SEA of Water Industry Plans and Programmes, *Water Law*, 16 (4):115-121.

Statement of authorship[1]

This statement of authorship covers the following research article:

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The extent of **William Sheate's** contribution to the research article is evaluated according to the following scale:

A. has contributed to collaboration (0-33%).
B. has contributed significantly (34-66%).
C. has essentially performed this study independently or undertaken the majority of the work (67-100%).

Declaration for the individual elements	**Extent (A,B,C)**
1. Design of the project including formulation of problems to be tested and design of individual experiments.	C
2. Planning of experiments and design of methods to answer the problems posed under # 1 including choice and development of methods.	B
3. Involvement in analysis and data collection.	B
4. Presentation and interpretation and discussion of the results obtained in article form.	C

Other comments
William Sheate is the first and corresponding author of this article, with the component on drought plans contributed by Leinster.

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[1] Co-authors are defined according to the Vancouver rules see http://www.icmje.org/index.html

STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA) OF WATER INDUSTRY PLANS AND PROGRAMMES

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BACKGROUND TO THE SEA DIRECTIVE

Historically the UK Government has had a somewhat schizophrenic approach to strategic environmental assessment (SEA).[3] On the one hand, it has been resistant in varying degrees to EC legislation in the area. For example, it vetoed a very early draft of the SEA Directive at the Edinburgh summit in 1992.[4] On the other hand, it has introduced its own (weaker) form of SEA without using the name; for example, environmental appraisal (of land use plans), 'policy appraisal and the environment' (policies), and sustainability appraisal (regional land use and economic strategies). When it came to implementing the SEA Directive, this approach created something of a rod for the government's own back. The UK has faced very particular implementation challenges since it has had to reconcile the directive with its own existing weaker and broader appraisal systems.

Having finally agreed to the SEA Directive (with some in government initially believing existing systems would meet the directive's requirement) it soon became apparent that the directive could be more far reaching than expected. Environmentalists had succeeded in strengthening key aspects[5] and would inevitably push hard for effective implementation. While the Office of the Deputy Prime Minister (ODPM, in charge of land use planning) was the lead department in examining implementation, the fragmented practice of strategic assessment across government departments and agencies, and the devolved administrations in Scotland and Wales, meant continued uncertainty as to what implementing legislation would look like. While the EIA Directive had been implemented through a vast raft of secondary regulations, this could be very cumbersome for plans and programmes as well.

The UK decided therefore to use one overarching regulation under the European Communities Act 1972 to apply across all sectors in England, with separate sets of regulations also for Scotland, Wales and Northern Ireland (ie four sets in total). The Scottish Executive, in contrast, is going beyond the scope of the SEA Directive and is taking forward an SEA bill through the Scottish Parliament (which will eventually revoke the regulation) and applying SEA to a wider range of public sector strategies, plans and programmes than the directive requires.[6] The Scottish Executive is also undertaking research into the application of SEA in Scotland.[7]

PLANS AND PROGRAMMES TO WHICH THE DIRECTIVE WILL APPLY

During negotiations on the development of the SEA Directive there was considerable debate over the scope of application.[8] The challenge for the UK and other Member States in implementing the directive is first to establish those strategic initiatives that constitute a 'plan or programme' for the purposes of the SEA Directive.[9] The fact that the directive applies to administrative as well as legislative and regulatory provisions suggests that it may apply to a wide range of non-statutory plans and programmes, should these be considered to set the framework for subsequent

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2 Material in this paper relating to drought plans is based on work undertaken for his MSc thesis in Environmental Technology at Imperial College London, September 2005.

3 C Wood *Environmental Impact Assessment: A Comparative Review* (Longman Scientific and Technical Harlow 1995); J Glasson, R Therivel and A Chadwick *Introduction to Environmental Impact Assessment* (2nd edn UCL Press London 1998); WR Sheate *Environmental Impact Assessment: Law and Policy – Making an Impact II* (2nd edn Cameron May London 1996).

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6 Scottish Executive *Proposals for Green Government* news release 23 October 2003 Edinburgh available at www.scotland.gov.uk/pages/news/2003/10/Seen667.aspx (accessed 4 December 2003).

7 SEA Pathfinder project: SEA Case Studies evaluation, being undertaken by EnviroCentre and Collingwood Environmental Planning 2005–2007.

8 Sheate 'The EC Directive' (n 5).

9 Plans and programmes '... which are subject to preparation and/or adoption by an authority at national, regional or local level or which are prepared by an authority for adoption, through a legislative procedure by Parliament or Government, and – which are required by legislative, regulatory or administrative provisions' (art 2a).

projects. Secondly, of those plans and programmes prepared for the sectors listed, Member States must establish whether or not they 'set the framework for' the future development consent of projects requiring Environmental Impact Assessment (EIA) under the EIA Directive.[10] Crucially, the SEA Directive does not appear to constrain SEA to those plans and programmes that set the framework for their 'respective' projects (ie in a vertical hierarchy). It would seem therefore that a transport or a water resource plan in some circumstances may be deemed to set the framework for a development project such as housing. The European Commission's guidance on implementing the SEA Directive recognises that the EIA Directive was seen by the European Court of Justice (ECJ) in C–72/95 *Kraaijeveld* to have wide scope and a broad purpose and suggests that a similar approach should be adopted by Member States for the SEA Directive.[11] However, there remains considerable uncertainty as to what constitutes 'administrative provisions'. It may be that in order to avoid the risk of challenge, some authorities will take a pragmatic approach and choose to carry out SEA as a precautionary measure to avoid later challenge in cases where they are uncertain that SEA is required, but resource issues may constrain this proactive approach. There are certain UK plans and programmes to which it is almost certain the SEA Directive applies; principally those in the land use planning and infrastructure sectors included in Table 1 which are included in ODPM's indicative list.[12]

The SEA Directive makes special provision for those plans and programmes which are prepared for sectors other than those specified and which do not set the framework for projects requiring EIA, or require appropriate assessment under the Habitats Directive. Article 3(4) provides a far-reaching 'catch all' for applying SEA to any plans and programmes, over and above those defined:

> Member States shall determine whether plans and programmes, other than those referred to in paragraph 2, which set the framework for future development consent of projects, are likely to have significant environmental effects.

The plans and programmes to which this article applies are therefore all those which set the framework for future development consent of projects even if not listed in the Directive (Article 3(2)). This includes *sectors* not already listed as well as future *projects* undertaken for those sectors which are not covered by the EIA Directive.[13] Determining the significance of environmental effects for plans and programmes under Article 3(4) can be undertaken on a case-by-case basis or by specifying types of plans and programmes, or a combination of both (as is the case with the EIA Directive). Annex II provides a series of criteria to be taken into account when deciding whether or not a given plan or programme has significant environmental effects.

Table 1: Examples of plans and programmes to which the SEA Directive is likely to apply (adapted from ODPM, 2005)

Land use planning	• **Regional Spatial Strategies (RSSs)** • **Regional Economic Strategies (RESs)** produced by Regional Development Agencies • **Local Development Documents: including Development Plan Documents and Supplementary Planning Document** • **Waste Local Plans, Minerals Local Plans** prepared by local authorities
Transport	• **Regional Transport Strategies** (part of RSS) • **Local Transport Plans** prepared by local authorities (either individually or in partnership)
Water sector	• **River Basin Management Plans and 'Programmes of Measures'** – the Water Framework Directive (WFD) introduces a requirement to produce a River Basin Management Plan and Programme of Measures to coordinate water-quality related measures within each river basin district • **Salmon Action Plans** • **[Water Resources Management Plans**, produced by the water companies][14]
Energy sector	• **Nuclear Decommissioning Strategies** • **Oil and Gas, and Offshore Windfarm Site, Licensing Rounds**

A key issue relates to appropriate assessment under the Habitats Directive. Article 3(2)(b) provides that plans and programmes which require 'appropriate assessment' under the EU Habitats Directive (92/43/EEC) – certain plans likely to have significant effects on Natura 2000 sites (Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs designated under the Birds Directive (79/409/EEC)) or on proposed SACs – automatically require SEA.

THE WATER SECTOR

The water sector in the UK has historically had a tradition of strategic planning through integrated river basin management[15] and the SEA Directive has the potential to impinge upon a wide range of plans and programmes within this sector. The water sector also

10 Plans and programmes '... which are prepared for agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use and which set the framework for future development consent of projects listed in Annexes I and II to Directive 85/337/EEC' (Art 3(2)).

11 Commission of the European Communities 2003 para 3.4.

12 ODPM *A Draft Practical Guide to the Strategic Environmental Assessment Directive* (ODPM Welsh Assembly Government Scottish Executive and Dept of the Environment Northern Ireland July 2005).

13 Commission of the European Communities *Implementation of Directive 2001/42 on the Assessment of the Effects of Certain Plans and Programmes on the Environment* (European Commission 23 September 2003) available at http://europa.eu.int/comm/environment/eia/030923_sea_guidance.pdf (accessed 5 December 2003).

14 Water Company Water Resource Management Plans were in the original indicative list in the draft ODPM guidance in 2004, and then removed in the 2005 final version. However, it is likely that they will be in the ODPM's web-based indicative list which will be continuously updated. The varying status of such plans reflects Defra's uncertainty as to the extent to which such plans meet the SEA Directive criteria.

15 H Byron and WR Sheate 'Strategic Environmental Assessment: Current Status in the Water and Electricity Sectors in England and Wales' Environmental Policy and Practice (1997) 6(4) 155–65.

illustrates how the SEA Directive may relate to and set the framework for a wide range of different forms of development consent, other than just the usual planning permission most commonly associated with EIA.

To which water sector plans and programmes will the SEA Directive apply?

The SEA screening criteria are somewhat mechanical and indeed demanding to meet. If all the criteria are not met then the SEA Directive does not apply. Consequently the SEA Directive may not necessarily, in practice, apply to as many forms of plans and programmes as might have been imagined. In summary, the directive applies:

[Art 2 (a)]

- to *plans* and *programmes* that are *subject to preparation and/or adoption* by an *authority* at national, regional or local level *or* which are prepared by an authority for adoption, through a legislative procedure by Parliament or government, and
- which are *required* by *legislative, regulatory* or *administrative provisions*

[Art 3 (1)]

- An environmental assessment, in accordance with Articles 4 to 9, shall be carried out for plans and programmes referred to in paragraphs 2 to 4 which are likely to have significant environmental effects.

[Art 3 (2)]

Subject to paragraph 3 [small areas/minor modifications], an environmental assessment shall be carried out for all plans and programmes

- (a) which are prepared for agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use *and* which *set the framework for* future development consent of projects listed in Annexes I and II to Directive 85/337/EEC *or*
- (b) require an assessment pursuant to Article 6 or 7 of Directive 92/43/EEC Habitats Directive.

There is some ambiguity over whether all the sectors listed in Article 3 (2) automatically require SEA, ie whether they always have significant effects, or not. Article 3 (2) is often regarded as establishing a list of those plans and programmes that should be subject to compulsory SEA.[16] This is supported when read in conjunction with Article 3 (4), ie that Article 3 (4) only makes sense if all the sectors in Article 3 (2) (a) are likely to have significant effects. However, Article 3 (1) (see above) could be read as qualifying the SEA requirement for those plans and programmes listed in Articles 2 to 4 as only those plans and programmes in listed sectors that are likely to have significant effects, rather than that they all automatically should be regarded as having significant effects. In addition, Article 3 (4)[17] itself is not free from ambiguity, even when read in conjunction with the preamble.[18] So there is likely to remain debate about exactly which plans and programmes fall within these particular criteria, even before one considers whether a plan or programme sets the framework for subsequent development consent. It is worth looking at some key examples of plans and programmes within the water sector in order to examine whether and where the SEA Directive will apply.

Examples of where the SEA Directive could apply

1. The Water Framework Directive

The Water Framework Directive (2000/60/EC) (WFD), inter alia, introduces a River Basin Management Plan (RBMP) and a Programme of Measures (PoM) to coordinate water quality-related measures within each river basin. According to the Commission guidance (CEC, 2003) it is not possible to state categorically whether or not the RBMP and the PoM are within the scope of the SEA Directive. Such an assessment should be done on a case-by-case basis and the usual tests in Article 2 and 3 of the SEA Directive will need to be applied in each case. Since the RBMP and the PoM are both required by the WFD and have to be prepared by authorities, the main question is whether they set the framework for the future development consent of projects. The Environment Agency (for England and Wales), commissioned research[19] on the relationship between the WFD and SEA Directives, which concluded that SEA would be required for PoMs but probably not for the RBMP itself, which is regarded as a summary document. The ODPM guidance (2005), however, includes both the RBMP and PoMs in the indicative list.

2. Environment Agency water resource strategies

In England and Wales, National and Regional Water Resource Strategies, produced by the Environment Agency, set the context in which future project decisions will be taken by water companies, eg new reservoirs, water abstraction, and water transfer schemes, all of which will be subject to the EIA Directive. While the Environment Agency is only a consultee in the development consent (planning) process for such projects, it is the licensing authority for abstractions and discharges (also 'consents' under the EIA Directive) and has a duty to ensure adequate distribution of water resources. Nowhere in primary or secondary legislation is there any requirement on the Environment Agency to produce water resource strategies. The question of whether water resource strategies are 'required' therefore turns on what might constitute an administrative provision.

The Environment Agency produces water resource strategies for a very clear purpose, and that is in

16 J Robinson, D Elvin, 'The Environmental Assessment of Plans and Programmes' [2004] JPL 1028–1048.

17 ibid p 2.

18 Recital 10 can also be read ambiguously.

19 ENTEC *Comparative Legislative Review of the Water Framework Directive and Strategic Environmental Assessment Directive* Final Draft Report (Entec UK Ltd/University of Manchester School of Planning and Landscape October 2003).

pursuance of fulfilling its duty under the 1995 Environment Act to act 'for the purpose of conserving, redistributing or otherwise augmenting water resources in England and Wales; and of securing the proper use of water resources in England and Wales' (section 6, Environment Act 1995). This was amended by the Water Act 2003 to include the efficient use of those resources (section 72, WA 2003). It would seem, therefore, that a plausible argument could be constructed that while WRSs are not required by legislation they are part of the means by which the Environment Agency fulfils its duty to conserve and manage water resources, and there is a reasonable expectation that these strategies will be produced and be taken into consideration by decision-makers and water companies. Evidence to support this line of argument – of WRSs being administrative provisions[20] – can be found on the Environment Agency's own website:[21]

> The Environment Agency is the statutory body with a duty to secure the proper use of water resources in England and Wales. For this reason we have prepared this water resources strategy for England and Wales. The strategy looks some 25 years ahead and considers the needs of public water supply, agriculture, commerce and industry, as well as the environment.
>
> The strategy examines the uncertainties about future water demand and availability including the potential effects of climate change and different societal values. We conclude with a series of actions that will provide the right amount of water for people, agriculture, commerce and industry and an improved water-related environment.

By their nature, water resource strategies could result in significant effects on the environment, eg by promoting groundwater abstraction or new reservoirs. So water resource strategies would also appear to set the framework for future development consent of projects under the EIA Directive, albeit indirectly,[22] and the framework for abstraction licensing. Water resource strategies fit firmly within the water resources planning hierarchy (see Figure 1). Indeed, that is the key purpose behind the strategies' development and forms of SEA have already been applied by the Agency[23] in *Water Resources for the Future: A Strategy for England and Wales* (see Figure 1, p 118). This follows a much earlier pioneering attempt at SEA by the predecessor to the Environment Agency, the National Rivers Authority in 1994.[24] The intention has always been to provide a strategic environmental context within which water company investment decisions come forward and therefore any applications for subsequent development projects. To date Defra and the Agency have taken the view that water resource strategies produced by the Environment Agency do not come under the SEA Directive, because while they are strategies produced by an authority they are not required by *legislation, regulation or administrative provisions*. However, ultimately this may not be a sustainable position and would seem to be potentially challengeable at least.

3. Water companies

The privatised water companies in the UK also appear to come under the SEA Directive. The European Commission guidance on implementation[25] recognises that privatised utilities often have statutory responsibilities to undertake strategic planning that if they were carried out by a public authority would otherwise be subject to the SEA Directive. In such circumstances it is expected that water companies will be required to undertake SEA, eg in developing their own water resources management plans which then feed into the Asset Management Planning process to Ofwat. Many have undertaken voluntary SEAs already.[26] In many cases the need for a public strategic process has arisen where controversial schemes might be required, eg new reservoirs. This has encouraged the water companies to adopt voluntary SEA, but a formally required and public process will present some challenges.

Water resources management plans

The Water Act 2003 requires water companies to produce water resource plans as part of their normal asset management planning (AMP) process via the Water Regulator (Ofwat).

> **s 62 Water resources management plans**
> After section 37 of the WIA there is inserted –
>
> **'37A Water resources management plans: preparation and review**
>
> (1) It shall be the duty of each water undertaker to prepare and maintain a water resources management plan.
>
> (2) A water resources management plan is a plan for how the water undertaker will manage and develop water resources so as to be able, and continue to be able, to meet its obligations under this Part.
>
> (3) A water resources management plan shall address in particular –
>
> (a) the water undertaker's estimate of the quantities of water required to meet those obligations;

20 The Commission guidance (CEC 2003 para 3.16) provides only marginal help, suggesting administrative provisions are 'formal requirements for ensuring that action is taken which are not normally made using the same procedures as would be needed for new laws and which do not necessarily have the full force of law. ... Extent of formalities in its preparation and capacity to be enforced may be used as indications to determine whether a particular provision is an "administrative provision" in the sense of the Directive. Administrative provisions are by definition not necessarily binding, but for the Directive to apply, plans and programmes prepared or adopted under them must be required by them, as in the case with legislative or regulatory provisions.'

21 http://www.environment-agency.gov.uk/subjects/waterres/137651/?version=1&lang=_e (emphasis added) [accessed 11 September 2005].

22 At para 3.23 of the guidance the Commission recognises that 'setting the framework' may be indirect, eg the plan or programme contains criteria or conditions which guide the way the consenting authority decides an application for development consent (for projects under the EIA Directive), such as placing limits on the type or extent of activity.

23 Environment Agency *Water Resources for the Future: A Strategy for England and Wales* (Environment Agency Bristol 2001).

24 National Rivers Authority (NRA) *Water – Nature's Precious Resource – An Environmentally Sustainable Water Resources Strategy for England and Wales* (National Rivers Authority March 1994).

25 *Implementation of Directive 2001/42* (n 14).

26 Eg Thames Water *Planning for Future Water Resources: Best Practicable Environmental Programme* (2000) final report prepared by Consultants in Environmental Science, Land Use Consultants, OXERA and Wessex Archaeology.

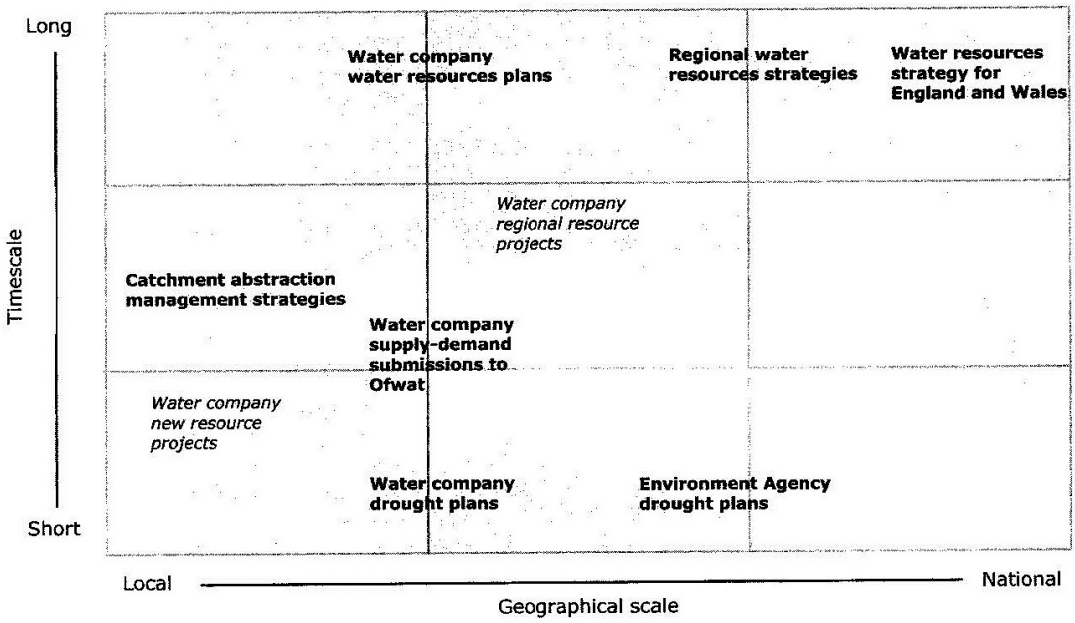

Figure 1: Scale of water resources planning activities (Source: adapted from EA, 2001, p 15)

(b) the measures which the water undertaker intends to take or continue for the purpose set out in subsection (2) above (also taking into account for that purpose the introduction of water into the undertaker's supply system by or on behalf of licensed water suppliers);
(c) the likely sequence and timing for implementing those measures; and
(d) such other matters as the Secretary of State may specify in directions ....'

Most commentators and water companies accept that WRMPs come under the SEA Directive, ie they are produced by an authority, required by legislation, set the framework for subsequent development consents and are likely to have significant effects on the environment. The plans for which there remains more doubt are drought plans.

Drought plans

Drought plans are also required to be prepared by the water companies under the Water Act 2003:

s 63 Drought plans
After section 39A of the WIA there is inserted –

'39B Drought plans: preparation and review

(1) It shall be the duty of each water undertaker to prepare and maintain a drought plan.

(2) A drought plan is a plan for how the water undertaker will continue, during a period of drought, to discharge its duties to supply adequate quantities of wholesome water, with as little recourse as reasonably possible to drought orders or drought permits under Chapter 3 of Part 2 of the Water Resources Act 1991.

(3) The duties referred to in subsection (2) above include in particular those imposed under or by virtue of –

(a) section 37 above;
(b) sections 67 to 69 below.

(4) A drought plan shall address, in particular, the following matters –

(a) what measures the water undertaker might need to take to restrain the demand for water within its area;
(b) what measures the water undertaker might need to take to obtain extra water from other sources (also taking into account for that purpose the introduction of water into the undertaker's supply system by or on behalf of licensed water suppliers);
(c) how the water undertaker will monitor the effects of the drought and of the measures taken under the drought plan;
(d) such other matters as the Secretary of State may specify in directions.'

How, then, do drought plans square up against the SEA Directive screening criteria? First they are produced by an authority (on the basis that a water company represents an emanation of the state).[27] Secondly, they are clearly required to be prepared by legislation – the Water Act 2003. Since water resource plans and programmes are listed in Article 3 (2) it might be construed that they are likely to have significant effects (though there is debate over whether Article 3 (2) infers that those sectors listed will automatically have significant effects on the environment).

The key question for drought plans is whether they set the framework for subsequent development consent. What might the development consents be for which they might set the framework? Drought permits and drought orders are two such development consents that most commentators (including Defra) accept would be considered to be development consents

27 See for example *Implementation of Directive 2001/42* (n 14) paras 3.11–3.13; Robinson and Elvin (n 16) p 13.

under the SEA Directive.[28] Are drought plans likely to be referred to by the decision-maker in granting drought orders, for example? If not, what is their purpose? Irrespective of any discretion the secretary of state might have in granting drought orders, he would still be likely to make reference to the drought plan, especially as it has to be approved by the Environment Agency in the first place. The Environment Agency is very clear that it is only likely to approve drought permits or support drought orders if they are consistent with the relevant drought plan.[29]

So there appear to be strong arguments for drought plans to be subject to the SEA Directive on the basis of the screening criteria, particularly with regard to setting the framework for drought permits and drought orders. Drought plans might also set the framework (at least for the water companies) for schemes that might come forward and require applications for planning consent. Moreover, it would seem particularly odd if they did not meet the SEA Directive criteria, given that water resource management plans would certainly appear to be subject to the SEA Directive; and would then potentially raise other issues of access to information and ability of the public to participate in line with the Aarhus Convention.[30]

LEGAL REQUIREMENTS VS SEA THEORY AND PRACTICE

The relationship between different levels of plans, of course, introduces the concept of tiering, traditionally seen as a vertical hierarchy, but tiering under the SEA Directive would not necessarily appear to have to be such a direct relationship, eg a water resource strategy might set the framework indirectly (in terms of water availability) for subsequent decisions on housing development. However, as Figure 1 shows, there is already a strong vertical and horizontal hierarchical relationship between plans and strategies within the water sector. So another question concerning the Environment Agency and Defra has been how the SEA Directive will impinge on local or specific plans or strategies, eg catchment abstraction management strategies (CAMS), which set the framework for decisions about abstraction licensing at the local (sub-regional) level. In the case of CAMS, the Environment Agency has already developed its own elaborate sustainability appraisal (SA) guidance for CAMS[31] and, therefore, if SA is seen internally as appropriate for CAMS it would seem inconsistent to suggest that SEA was not also appropriate (ie that CAMS are likely to have significant environmental effects). CAMS clearly set constraints on (and therefore the framework for) subsequent projects, not just abstractions (which may or may not come under the EIA Directive), but also other forms of development, such as housing, industry etc. Either SEA or SA have been applied already to water resource plans and strategies at all levels voluntarily by the Agency. However, CAMS are not included in the current ODPM indicative list. There are some suggestions that this has been primarily because of resource constraints and therefore a desire to minimise the assessment requirement in the short term rather than ensure the SEA Directive is applied to those plans and programmes where it is most needed. If water resource strategies meet the screening criteria for the SEA Directive, then it would seem so should CAMS.

Any plan or strategy that already has a form of SEA or SA applied to it should, on the basis of SEA theory and practice, be subject to the SEA Directive, since almost by definition the current SEA or SA is being undertaken for the reason of assessing the environmental effects of strategic options which are likely to affect individual projects coming forward at a later stage.

It is important to appreciate that whether the SEA Directive applies is a legal issue, ie whether the screening criteria of the SEA Directive are met. This is not the same as whether SEA as an assessment process should apply from the point of view of SEA theory or practice.[32] The SEA Directive does not require Member States to produce certain types of plans; it only requires SEA if certain types of plans or programmes meet the criteria laid down in the directive. Strategic plans or programmes may not exist in certain sectors, or they may exist and be produced routinely as a matter of good practice, but not 'required' and so will not come under the SEA Directive. The Directive may even encourage some Member States to remove the requirement to produce certain plans formally when they come to review specific legislation. Even though there may be very good arguments in terms of SEA theory or practice as to why certain plans or programmes should be subject to SEA, including that they have significant effects on the environment, if they do not meet the screening criteria in full the SEA Directive will not apply. Much will no doubt rest on the European Court of Justice's interpretation in future case law of 'required by legislative, regulatory or administrative provisions' (Article 2 (a)).

CONCLUSIONS

The potential linkages between the Water Framework Directive and the SEA Directive are many and varied and have been considered elsewhere.[33] However, the

28 T Leinster *Interpreting the SEA Directive with Particular Reference to Drought Plans* (MSc Thesis in Environmental Technology Imperial College London September 2005).

29 See Environment Agency *Water Company Drought Plan Guideline 2005* (September 2005) s 7 p 14–15 available at www.environment-agency.gov.uk. While the guideline discusses at some length the need for environmental considerations in the monitoring proposals within drought plans (s 8 p 15), it is equivocal over whether SEA is needed, leaving the responsibility firmly with the water companies (s 8.4 p 18).

30 Robert McCracken QC, 2 Harcourt Buildings, personal communication, 2005.

31 Environment Agency *CAMS Sustainability Appraisal Guidance* (Version 4) (Environment Agency Bristol 2002).

32 WR Sheate H Byron S Dagg and L Cooper *The Relationship between the EIA and SEA Directives* Final Report to the European Commission August 2005. To be available on http://europa.eu.int/comm/environment/eia.

33 ENTEC *Comparative Legislative Review of the Water Framework Directive and Strategic Environmental Assessment Directive* Final Draft Report (Entec UK Ltd/University of Manchester School of Planning and Landscape October 2003).

strong strategic integrated river basin management framework that already exists in the UK water sector means that the UK should be better placed than some Member States to implement the WFD. Furthermore, the UK has long-standing experience of applying environment assessments at varying levels of decision-making throughout the water sector. How far down the hierarchy of water resource management plans and programmes the SEA Directive will apply has yet to be determined and will no doubt be explored on a case-by-case basis. There is a case, however, for SEA to apply to all plans in the hierarchy, subject to the avoidance of duplication.

The privatised water companies will be affected by the SEA Directive – it seems almost certainly with regard to water resources management plans, but most likely also for drought plans. Both of these have significant implications in terms of opening up previously closed decision-making processes to wider public participation. While some voluntary SEA has been undertaken by water companies in the past, the legal requirement to do so raises key issues for the companies of confidentiality, and access to information. A more immediate challenge for water companies – if SEA is required for drought plans – will be how to deliver SEA for drought plans when draft drought plans must be submitted by 31 March 2006.[34] The environmental report for any SEA will need to be submitted with the draft plan, which creates a very tight timetable if decisions have not already been made as to whether an SEA is required.

The extent to which water related plans and programmes might set the framework indirectly for other, non-water, development projects needs to be explored further. It may mean rather more plans and programmes meet the SEA screening criteria of 'setting the framework' if this is interpreted broadly. The potential discord between the law and SEA theory and practice is a cause for concern, since this runs the risk of creating false perceptions and dissatisfaction among stakeholders with regard to the real scope and application of the SEA Directive.

34 *Water Company Drought Plan Guideline* (n 29) s 2 p 5.

Appendix 14

SHEATE, W.R. and Bennett, S. (2007), *The Water Framework Directive, Assessment, Participation and Protected Areas: What are the Relationships?* Synthesis Report to the Irish Environmental Protection Agency, ERTDI Research Programme, Report No. 67 ISBN 1-84095-237-7, October 2007, available at http://www.epa.ie/downloads/pubs/research/water/name,23575,en.html

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The extent of **William Sheate's** contribution to the research article is evaluated according to the following scale:

A. has contributed to collaboration (0-33%).
B. has contributed significantly (34-66%).
C. has essentially performed this study independently or undertaken the majority of the work (67-100%).

Declaration for the individual elements	**Extent (A,B,C)**
1. Design of the project including formulation of problems to be tested and design of individual experiments.	B
2. Planning of experiments and design of methods to answer the problems posed under # 1 including choice and development of methods.	B
3. Involvement in analysis and data collection.	B
4. Presentation and interpretation and discussion of the results obtained in article form.	B

Other comments
William Sheate is the first and corresponding author of this synthesis report, and principal investigator/project manager of the Irish EPA ERTDI research contract. Suzan Bennett was the main researcher employed on the contract.

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[1] Co-authors are defined according to the Vancouver rules see http://www.icmje.org/index.html

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WATER QUALITY

The Water Quality Section of the Environmental RTDI programme addresses the need for research in Ireland to inform policymakers and other stakeholders on a range of questions in this area. The reports in this series are intended as contributions to the necessary debate on water quality and the environment.

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Executive Summary

The Water Framework Directive (WFD) 2000/60/EC has significant interconnections and linkages with other EU legislation. The focus of this study was on the similarities and overlaps between the WFD and the Environmental Assessment directives (Environmental Impact Assessment [EIA] – 85/337/EEC as amended by 97/11/EC and 2003/35/EC, and Strategic Environmental Assessment [SEA] – 2001/42/EC), Public Participation directive (2003/35/EC), and the Birds (79/409/EEC) and Habitats (92/43/EC) directives. The aim of the study was to examine the extent and nature of potential overlaps of the WFD with the Birds, Habitats, Public Participation, EIA and SEA directives within River Basin Districts (RBDs) in Ireland. Specific objectives were to:

- clarify the legal relationship between the six directives;
- identify situations where overlaps are possible;
- describe in detail selected case studies of potential overlaps within RBDs in Ireland; and
- make recommendations for resolving any problems which emerge.

The research was undertaken primarily from January to July 2006 and included an extensive literature review, a review of relevant case law, detailed textual and legal analysis of the directives, an email survey of stakeholders and detailed analysis of three case studies. The WFD provided the focus for the textual analysis of the six directives and its linkages with the other directives. The key links between the WFD and the other directives relate, for example, to their objectives to integrate the environment into decision-making, forms of assessment required, and public involvement in decision-making. Three case studies were selected (Greater Dublin Water Supply, Lough Corrib, and international RBDs with Northern Ireland, UK), each with the potential to highlight different sets of interactions between the WFD and the other directives.

Most significant among the interactions identified was the potential for overlap in assessment between the WFD and SEA. All river basin management plans (RBMPs) and programmes of measure (POMs) will need to be screened for SEA, but prima facie both would appear to have the potential to meet the SEA directive criteria. The view from this research is that both RBMPs and POMs should be subject to the SEA directive, recognising that each will need to assess different issues at their respective levels. The consultation requirements on the RBMPs are quite demanding and consultation strategies need to be put in place well in advance of drafting the RBMPs/POMs. SEA can help facilitate this, for example through consultation on the environmental report at the same time as the draft RBMP/POMs. There is a need for consistent methods of involving 'interested parties' across the RBDs and for good coordination between authorities managing RBDs.

The potential interactions between RBMPs and county development plans (CDPs) are numerous and potentially far reaching. The exact nature of the relationship will depend upon the types of developments that are likely to emerge out of the RBMP/POMs process that are of sufficient importance to influence CDPs; and those that are likely to arise through the development planning process and have significant influence upon the RBMP/POMs process. SEAs and EIAs may be triggered by RBMPs/POMs and CDPs, amendments to these plans and via significant infrastructure projects, creating the potential for overlaps, duplication and synergy between different levels of assessment.

The WFD has the potential to complement the Habitats and Birds directives in improving the ecological status of aquatic Natura 2000 sites (the European ecological network of special areas of conservation). However, both RBMPs and POMs will need to be screened for appropriate assessment (AA) under the Habitats directive on a case-by-case basis as to whether they might have adverse effects on the integrity of a designated site. Guidance will also be needed on how AA should interact with SEA and EIA where these are undertaken for RBMPs, POMs and projects. From this research it is clear that data issues remain uppermost in terms of the challenges faced by RBDs and conservation bodies implementing the Birds and Habitats directives.

Baseline data from different processes, particularly in relation to conservation, need to be improved as a matter of urgency – both in terms of quality of data gathered and their availability.

Finally, although not considered in detail in this research (given its draft status) the proposed EU Floods directive provides a further example where potential overlap may occur with the WFD, and will warrant further study once it has been finalised.

1 Introduction

The Water Framework Directive (WFD) 2000/60/EC has significant interconnections and linkages with other European Union (EU) legislation. The focus of this study was on the similarities and overlaps between the WFD and the Environmental Assessment directives (Environmental Impact Assessment [EIA] – 85/337/EEC as amended by 97/11/EC and 2003/35/EC, and Strategic Environmental Assessment [SEA] – 2001/42/EC), Public Participation directive (2003/35/EC), and the Birds (79/409/EEC) and Habitats (92/43/EC) directives. The effectiveness of all directives is likely to be maximised by a much clearer understanding of how they might operate together in complementary and potentially synergistic ways, particularly in the way in which they are transposed and implemented in individual member states.

1.1 Aim

The aim of the study was to examine the extent and nature of potential overlaps of the WFD with the Birds, Habitats, Public Participation, EIA and SEA directives within River Basin Districts (RBDs) in Ireland.

1.2 Objectives

The objectives were to:

- clarify the legal relationship between the six directives (Task 1);
- identify situations where overlaps are possible (Task 2);
- describe in detail selected case studies of potential overlaps within River Basin Districts in Ireland (Task 3); and
- make recommendations for resolving any problems which emerge (Task 4).

1.3 Research Approach and Methodology

The main research period ran from January to July 2006. The Environmental Protection Agency (EPA) established a small steering group which met at the start of the project, on 23 March and 11 July 2006; members provided feedback on the draft reports. A presentation was also made to the WFD Technical Coordination Group on 9 March 2006, which provided useful contacts between RBDs for the case studies. The study involved a detailed examination of the legal texts of the above directives to provide an initial theoretical analysis of areas of overlap. The results of this review were also referred to Mr Zen Makuch (Barrister) at Imperial College London for further legal review.

This was followed by an extensive literature review and an email-based questionnaire survey of key stakeholders in the seven RBDs (under the WFD) in Ireland to identify more specific issues of overlap for further detailed case-study examination across the RBDs. Three case studies were selected to provide illustrative cases of where the WFD is most likely to interact with the other key directives in Ireland, and to provide the basis of recommendations for policy-makers and stakeholders on how to address potential problem areas and opportunities arising out of these overlaps. This is the synthesis (summary) report; the full final report is available to be downloaded from www.epa.ie.

2 The Legal Relationship between the Directives

2.1 Introduction

The links between the WFD, the EIA and SEA directives, the Public Participation directive and the Birds and Habitats directives[1] are superficially apparent – for example, in relation to their objectives to integrate the environment into decision-making, forms of assessment required, and public involvement in decision-making. Many of the principles enshrined in these directives have their origins in the debates of the 1970s and 1980s over new EIA legislation for the European Community (EC), which sought to integrate the environment into decision-making, reflected in the objectives of the early Environment Action Programmes of the EC. The context for these key environmental directives, however, has changed over 30 years, from environmental protection to environmental integration to sustainable development, thus influencing their implementation.

2.2 The Water Framework Directive (WFD)

The overall aim of WFD 2000/60/EC is the long-term protection of all surface water and groundwater in the European Union (EU). It sets out to:

- prevent further deterioration in, and to protect and enhance, the status of aquatic ecosystems;
- promote sustainable water consumption based on the long-term protection of available water resources; and
- contribute to the provision of a supply of water in the qualities and quantities needed for its sustainable use.

The main objectives of the WFD are to:

- expand the scope of water protection to all waters: surface waters and groundwater;
- achieve 'good status' for all waters by 2015;
- manage water based on river basins;
- establish a 'combined approach' using emission limit values and quality standards, plus the phasing out of particularly hazardous substances;
- involve the public more closely;
- ensure water pricing is correct; and
- streamline legislation.

To manage the water environment effectively the directive recognises that the whole river basin is the logical management unit and therefore requires member states (MSs) to identify river basins and their surface and groundwaters. The directive requires MSs to introduce river basin management plans (RBMPs) (Art. 13) for each river basin district (RBD). The concept of 'good water status' is also introduced by the directive, and is central to achieving its environmental aims. Surface waters will be measured in terms of both ecological and chemical status; groundwaters by quantitative and chemical status. To meet the objectives of good-water status the directive envisages the preparation and implementation of a 'programme of measures' (POMs) as part of the RBMP process. The RBMP also forms the focus for extensive consultation processes as part of involving the public more closely in river basin management decision-making. 'Competent authorities' (those given responsibility for RBMPs) will be expected to publish draft RBMPs for consultation, and these plans will be updated and consulted on every six years. The WFD also requires the creation of a register of protected areas (Art. 6) in MSs within four years of the directive entering into force. Protected areas are those which have been designated as requiring special protection under specific EC legislation for the protection of their surface water and groundwater or for the conservation of habitats and species depending directly on water.

[1] Directives 2000/60/EC; 85/337/EEC as amended by 97/11/EC and 2003/35/EC; 2001/42/EC; 2003/35/EC; 79/409/EEC; and 2/43/EEC respectively.

Implementation in Ireland

Directive 2000/60/EC was transposed into Irish law through the European Communities (Water Policy) Regulations 2003 (S.I. No. 722/2003). These regulations may require future amendments in order 'to support the ongoing, detailed implementation of the Directive' (DoEHLG, 2004a); for example, the amendment S.I. No. 413 of 2005, which sets out additional elements for the establishment of River Basin District Advisory Councils. Under the requirements of the directive to identify RBDs the Ireland and UK governments identified eight RBDs on the island of Ireland: one situated wholly in Northern Ireland, four situated in Southern Ireland, and three situated 'across-border' and known as 'International River Basin Districts' (IRBDs) (DoEHLG/DoENI, 2003). At the time of writing RBMPs were under way in all RBDs.

2.3 Brief Overview of the Other Directives

2.3.1 Environmental Impact Assessment (EIA) Directive

The Environmental Imapact Assesment (EIA) directive (Directive 85/337/EEC) is the controlling document, which lays down rules for environmental-impact assessment in MSs. The directive applies to the assessment of the environmental effects of public and private projects that may have significant effects on the environment. There are two classes of projects for which EIA is required: (i) projects for which EIA is mandatory (projects listed in Annex I); and (ii) projects for which EIA is discretionary (projects listed in Annex II). Directive 97/11/EC, known as the 'EIA Amendment Directive', amends the 1985 directive. This was introduced primarily to improve the earlier directive from knowledge gained through the application of the 85/337/EEC directive. Features of the Amendment Directive include: a 'scoping opinion' – where advice is provided from the local authority to the developer on the scope of EIA; a 'screening opinion' – where the developer may approach the local authority for an opinion on screening; new common screening criteria; improved consideration of alternatives; provision for the implementation of transboundary consultations between MSs under the Espoo Convention (UNECE, 1991); and changes to Annex I (inclusion of more projects) and Annex II (revised and updated in line with new technology, including clarifications on categories of project). The EIA directive was also most recently amended by the Public Participation directive (see Section 2.3.3 below).

Implementation in Ireland

The framework for applying EIA in Ireland was provided through the planning control procedures within the Local Government (Planning and Development) Acts, 1963 to 1983. The provision of EIA was implemented through the EC (Environmental Impact Assessment) Regulations 1989 (S.I. No. 349/1989). These EIA regulations excluded motorway schemes, the procedures for which were set out separately in the Local Government (Roads and Motorways) Act 1974 (now the Roads Act 1993). The EC (Environmental Impact Assessment) (Motorways) Regulations, 1988 (S.I. No. 221/1988), implemented EIA for proposed motorways. In 1997, however, a review of planning legislation took place and as a result it was decided that previous planning Acts and the EIA regulations would be consolidated into a new Planning and Development Act 2000. EIA requirements fall under Part X of this Act. The regulations, which implement the provisions of the Planning and Development Act, are the Planning and Development Regulations 2001 (S.I. No. 600/2001). EIA comes under Part 10 of the Planning and Development Regulations 2001 (Sheate et al., 2005).

As a result of the Planning and Development Regulations 2005 (S.I. No. 346/2005), amendments have recently been made to the Planning and Development Regulations 2001. These are mainly with regard to peat abstraction: large-scale peat abstraction projects involving areas greater than 10 hectares are no longer exempt from EIA. The 2005 regulations also make amendments to Schedule 5 of the 2001 regulations with regard to minor changes to the lists of project categories.

On 16 February 2006 the Irish government published The Planning and Development (Strategic Infrastructure) Bill 2006, which made amendments to the Planning and Development Act 2000 (enacted 16 July 2006).[2] This introduces a new consent process for major infrastructure of national and public importance (Finfacts Team, 2006), and could be considered a 'fast-track' planning procedure for major infrastructure projects (A&L Goodbody, 2006). Certain infrastructure projects, which are listed in a new Schedule 7 to the 2000 Planning Act, will be required to apply directly to An Bord Pleanála (the Irish Planning Appeals Board), rather than the relevant local authority for approval.

2.3.2 *The Strategic Environmental Assessment (SEA) Directive*

The main aim of Directive 2001/42/EC is to identify, describe and assess the likely significant environmental effects of certain plans and programmes, while they are being prepared and before they are adopted. The directive states that all plans and programmes within certain sectors (e.g. transport, water management, town and country planning) and those plans and programmes that set the framework for future development consent of projects, and which are listed in Annexes I and II of the EIA Directive 85/337/EEC, should be subject to environmental assessment.

Implementation in Ireland

Prior to the SEA directive there were no formal provisions for SEA in Ireland. However, under EU Structural Fund regulations (2081/93), an environmental assessment was required for national development plans, and the government introduced 'pilot' Eco-Audits (environmental appraisals) in 1999. These objectives-based appraisals were designed to be proactive and to occur at the policy-formation process. The Eco-Audit was piloted on the National Development Plan 2000–2006. Following the Eco-Audit it was hoped that a strategic environmental assessment system would be developed and applied to major sectoral plans and programmes, and that the Eco-Audit would continue to be applied at government policy level (Sheate et al., 2001).

Transposing the SEA directive into Irish law was very much influenced by previous experiences of implementing EIA. A study which reviewed the Eco-Audit process recommended the 'upstream transfer of EIA philosophy, rather than methodology' when transposing the SEA directive (Scott et al., 2003). According to the Department of Environment, Heritage and Local Government (DoEHLG), the delays encountered previously in relation to EIA implementation were not to be repeated, and Ireland implemented the provisions of the SEA directive in full by 21 July 2004, ensuring that all substantive and procedural requirements of the directive were met. The importance of following the text of a directive was highlighted when implementing the EIA directive and this approach was taken when preparing the SEA regulations.

The SEA directive was transposed into Irish legislation through:

- The European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. No. 435/2004) which covers plans and programmes as listed in Article 3(2) of the SEA directive except for land-use planning. These regulations make amendments to the Planning and Development Act 2000. This Act is the statutory basis for transposing the SEA directive into Irish legislation with regards to land-use planning.
- The Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No. 436/2004) which covers those plans and programmes in relation to land-use planning and amending the Planning and Development Regulations 2001 (S.I. No. 600 of 2001), as amended and the Planning and Development (Regional Planning Guidelines) Regulations 2003 (S.I. No. 175 of 2003).

[2] Planning and Development (Strategic Infrastructure) Act 2006 (27/2006). Available from http://www.oireachtas.ie/documents/bills28/acts/2006/a2706.pdf [Last accessed 24/11/06].

In November 2004 the Minister for DoEHLG produced a guidance document to assist relevant authorities and development agencies in implementing the requirements of Directive 2001/42/EC in relation to land-use planning (DoEHLG, 2004b). As of 2005 there were no immediate plans for drawing up separate guidance in relation to SEA in other sectors, but because of the procedural nature of the current guidance document it is considered applicable to a broader range of sectors, not just land-use planning. The EPA published guidance on SEA methodology in 2003 (Scott and Marsden, 2003), which was piloted in 2005 for the Midlands Waste Management Plan Review.

In January 2006 the European Commission published a proposed directive on the assessment and management of floods (CEC, 2006a). It is likely that under this directive Ireland would be required to make flood-risk management plans statutory and as such subject to mandatory SEA, i.e. SEA would become a statutory requirement of flood management.

2.3.3 Public Participation Directive

The obligations arising under the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice (UNECE, 1998) are implemented through the Public Participation Directive 2003/35/EC. In particular, the directive provides for public participation regarding the drawing-up of certain plans and programmes relating to the environment (listed in Annex I) and makes amendments to the EIA directive (85/337/EEC) and Integrated Pollution Prevention and Control (IPPC) directive (96/61/EC) with regard to the improvement of public participation and the provision of access to justice. Some of the main changes to the EIA directive as a result include: requirement to inform the public earlier in the environmental decision-making process (e.g. 'scoping'); enabling affected MSs to participate in the environmental decision-making procedures if a project is likely to have transboundary impacts; provision of information on the public participation process by the competent authority; and ensuring that the public have access to a legal review procedure.

Implementation in Ireland

Although Ireland signed up to the Aarhus Convention on 25 June 1998, it has yet to ratify (accept formally) the convention as of the publication date of this report. The EU, however, has ratified the Aarhus Convention and places obligations on MSs through the Public Participation directive. Amendments resulting from Directive 2003/35/EC, including amendments to the EIA and IPPC directives, were required to be implemented by MSs by 25 June 2005. As of 10 April 2005, the Irish authorities had not provided any indication as to how they proposed to implement the amendments (Ryall, 2005), and as of 14 February 2006 these provisions had not been implemented, with a question in Dáil Éireann (the lower house of the Irish parliament) put to the Minister for the Environment, Heritage and Local Government asking when he intends to implement Directive 2003/35/EC (Oireachtais, 2006). However, amendments made to Schedule 5 of the Planning and Development Regulations 2001 by the Planning and Development Regulations 2005 are said to transpose part of Directive 2003/35/EC (DoEHLG, 2005).

The European Communities (Access to Information on the Environment) Regulations 2007, S.I. No. 133/2007 were made finally in March 2007, coming into force on 1 May 2007.

There are moves, however, to incorporate the Aarhus Convention provisions, particularly in relation to the 'provision on access to justice'. The new Planning and Development (Strategic Infrastructure) Act 2006 allows non-governmental organisations (NGOs) extended access to judicial reviews (s.13) and helps ensure that Ireland complies with the international obligations under the Aarhus Convention (Finfacts Team, 2006). Section 13 of the new Act replaces Section 50 of the Planning and Development Act 2000 with regards to judicial review of applications, appeals, referrals and other matters.

2.3.4 *Birds Directive*

This directive (79/409/EC) relates to the conservation of all species of wild birds that occur naturally within European MSs, with particular emphasis on their protection, management and control. Species listed in Annex I of the directive are subject to special conservation measures with regard to their habitats. Habitats/territories, which are most suitable for the conservation of these species, are required to be classified as 'Special Protection Areas' (SPAs). Further SPA designations are required for species including hen harrier, and wetland/aquatic species golden plover, kingfisher and red-throated diver. The Birds directive is linked directly to the Habitats directive in that SPAs are included in the Natura 2000 network.

Implementation in Ireland

The Birds directive requires, among other things, the designation of SPAs. These requirements were first transposed in Ireland through both primary and secondary legislation, with the first four SPAs in Ireland being designated under The European Communities (Conservation of Wild Birds) Regulations 1985 (Linehan, 2005). Linehan (2005) also notes that the 1985 regulations have been amended – through extension of its schedule over the years – to account for the expanding number of SPAs. There are 142 SPAs in Ireland, of which 14 are transboundary with Northern Ireland (DoEHLG, 2005). SPAs are now controlled by the EU (Natural Habitats) Regulations 1997 (S.I. No. 94/1997) and SPAs are considered part of 'Natura 2000'. As such, these controls are the same as those applied to Special Areas of Conservation (SACs) under the Habitats directive, also part of Natura 2000.

2.3.5 *Habitats Directive*

The Habitats directive (92/43/EC) is concerned with the conservation (restoration and maintenance) of natural habitats and wild species of fauna and flora. Sites which host the natural habitat types listed in Annex I, and wild species listed in Annex II of the directive, are required to be included in a European ecological network of special areas of conservation called Natura 2000. Conservation measures are applied for the maintenance or restoration of natural habitats and/or population of species that occur within designated SACs.

Implementation in Ireland

Implementation of the Habitats directive was problematic in Ireland, as in many other MSs. A number of reasons – including high levels of controversy over designations and opposition from landowners concerning restrictions on land use – led to a delay in transposition and legal action by the European Commission (ECJ Case C-67/99). According to Laffan (2004) a threat by the Commission to withdraw Cohesion Fund monies was used as a lever on the Irish domestic system to speed up the process. The directive was transposed into Irish law in 1997 through the EU (Natural Habitats) Regulations 1997 (S.I. No. 94/1997). Irish habitats under these regulations include: raised bogs, active blanket bogs, turloughs, sand dunes, *machair,*[3] heaths, lakes, rivers, woodlands, estuaries and sea inlets (DoEHLG, 2004). The designations process is now almost complete: 358 candidate SACs have been transmitted to the Commission while a further 65 will be transmitted in mid-2007 (NPWS, 2006).

2.4 Textual Analysis

The WFD provides the focus for the textual analysis of the six directives and its linkages with the other directives. Multiple linkages among other directives, but not including the WFD, are therefore not directly relevant to this study. The comparative analysis concentrates on the directives (as the 'parent' legislation) and not the transposition of these directives in Ireland. Transposition into Irish law is addressed more specifically in the context of the individual case studies in Chapter 4. Figure 2.1 illustrates the key linkages schematically and these linkages are explored further in the case studies. Brief explanations of the Article references are included in Table 2.1, and Table A1 in

[3] Machair is a distinctive type of coastal grassland found in western Ireland and the north and west of Scotland. It is associated with calcareous sand, and blown inland by very strong prevailing winds from beaches and mobile dunes. The Gaelic word *Machair* is the only name for this major habitat type in Britain and Ireland.

Appendix 1 summarises the key overlaps and linkages identified across the specific articles of the six directives. Discussion of these issues follows below. Further detail is provided in the full final report.

2.4.1 Preambles

All the directives relate to the 'environment': 'water environment', 'environmental assessment', 'public participation in environmental matters', 'conservation of birds', and 'biodiversity'. The WFD preamble is consistent with both the EIA and SEA directives in that they all refer to '*integration*' into either policy areas or decision-making. '*Protection*' of the environment is a common thread between the WFD and SEA directives (and the Birds directive), as is the need for the WFD and SEA directives to fulfil the obligations of relevant international agreements/legislative requirements. The Public Participation directive is also required to fulfil the obligations arising under the Aarhus Convention.

Sustainability is an issue addressed by the WFD through the promotion of 'sustainable management' and by the SEA and Habitats directives through the 'promotion of sustainable development' and 'contribution to sustainable development', respectively. A key aim of the SEA directive, the WFD and European environmental policy is the achievement of sustainable development.

2.4.2 Titles

In terms of directive titles, the WFD does not share any common elements with the other directives i.e. it is 'stand-alone'. The WFD title specifically mentions 'water policy'. The EIA and SEA directives both refer to the 'assessment of effects', and while one relates specifically to 'public and private projects' (EIA), the other refers to 'plans and programmes' (SEA). The Public Participation directive is consistent with the SEA directive in that it also refers specifically to 'plans and programmes'. The Birds and Habitats directives share two common elements: both refer to 'conservation of' and both make reference to 'wild' aspects. The Birds directive refers to 'wild birds' whereas the Habitats directive refers to 'wild fauna'.

2.4.3 Objectives

Only three directives (EIA, SEA and Public Participation) refer specifically to their 'objectives' and only the SEA and Public Participation directives outline detailed objectives. The WFD directive sets out specific 'environmental' objectives in relation to the operation of the programme of measures (Art. 4). Articles in both the EIA and Habitats directives refer to the 'aims of this directive' (Arts 2[2] and 2[1] respectively), but only the Habitats directive sets these out explicitly. The WFD (Art. 1) and Birds directive (Art. 1[1]) use terms such as 'purpose of the Directive' and 'this directive relates to' respectively, to describe what each directive does.

The Public Participation directive makes a direct link with the EIA directive by amending it, for example by further specifying information to be provided to the public and the publication of reasons for consent decisions.

The SEA and the Public Participation directives both refer to plans and programmes: SEA in the context of the 'preparation and adoption of…' and Public Participation in the context of the 'drawing up of…'. Protection of the environment is a common element between the WFD and SEA directives, although the wording used is not identical.

One area with where the WFD does share a direct common element with the EIA and SEA directives is in the context of 'significant effects'. The WFD refers to 'significant adverse effects on the wider environment' (Art. 4[3]) in relation to the fulfilment of environmental objectives (though only in the context of HMWBs and AWBs) – while both the EIA and SEA directives refer to 'significant effects on the environment'.

2.4.4 Definitions

There are no similarities between the definitions in the WFD and those provided in the other directives (see Table A1, Appendix 1). The definitions within the WFD concentrate mainly on all aspects of 'water' as it is the 'object' of the directive. The public's involvement is emphasised in the directive, yet, interestingly, no definitions are provided for 'the public'. The EIA, SEA and

Public Participation directives, on the other hand, all share a common definition for the 'public' and 'public concerned'.[4] The Birds directive contains no definitions.

The Habitats directive's list of definitions refers mainly to 'conservation' and 'habitat', which again is the object of the directive. Under the WFD definitions, 'competent authority' is listed, but, like the SEA directive, it is left to MSs to interpret what this means and who exactly the 'competent authority' will be.

The EIA and SEA directives both define their objects of assessment ('project' and 'plans and programmes' respectively). However, the definition of 'project' is relatively 'simple' or 'stand-alone' and concentrates on establishing the activities that constitute a project. One requirement of the EIA directive (introduced by the EIA Amendment Directive 97/11/EC) is that a form of development consent must be put in place for projects requiring EIA. In contrast, the definition of 'plans and programmes' (PPs) concentrates principally on the body preparing the PP and its mandate for doing so, rather than the content of the PP. 'Content' issues are addressed, at least in part, in Article 3 of the SEA directive which deals with scope, but to reach consideration of Article 3 a PP must already have satisfied the definition of 'plans and programmes' in Article 2 (Sheate et al., 2005).

2.4.5 General Obligations

All directives set out the general obligations placed upon MSs explicitly. The WFD, EIA and SEA directives all set out the obligations of MSs to 'incorporate'/'integrate'/ 'apply' the relevant requirements/rules of the directives into: 'their territory' (WFD, Art. 3[5]), and into 'existing procedures' (EIA, Art. 2[2] & SEA, Art. 4[2]). The EIA, Birds and Habitats directives all mention the 'measures' that MSs need to adopt/take. The Birds and Habitats directives share a common obligation in relation to 'habitats'.

Plans and programmes are also mentioned in the obligations of the SEA and Public Participation directives, but the context in which they are used is different. In the SEA directive there is a requirement for 'environmental assessment' to be carried out 'during the preparation of a plan or programme' (Art. 4[1]), whereas under the Public Participation directive there is a requirement for the public to be given opportunities to participate in the 'preparation and modification or review of the plans and programmes' (Art. 2[2]).

2.4.6 Scope (Objects Requiring Mandatory Action)

The WFD requires that POMs (which should be specified in RBMPs) be applied within RBDs to 'surface waters', 'groundwater', and 'protected areas'. This is specified in Article 4(1). Annex V lays out the provisions that need to be fulfilled when applying the POM. It is mandatory (Art. 6) for MSs to develop and maintain a register of protected areas, including areas designated under the Birds and Habitats directives (Annex IV).

The EIA and SEA directives set out categories of 'objects' that must be subject to mandatory assessment: the EIA directive in Article 4(1) and Annex I; the SEA directive in Article 3(2). The categories of project requiring mandatory assessment under the EIA directive, however, are much more specific (Annex I sets out 21 categories of projects), whereas the SEA directive instead describes criteria that must be met for mandatory SEA to be required. Consequently, there appears to be greater scope for uncertainty and/or interpretation as to what requires assessment under the SEA directive. The onus is much more on MSs to interpret the criteria and determine which PPs should require SEA, rather than relying on a more detailed list (Annex 1, EIA directive) (Sheate et al., 2005).

[4] ""the public" means: one or more natural or legal persons and, in accordance with national legislation or practice, their associations, organisations or groups; "the public concerned" means: the public affected or likely to be affected by, or having an interest in, the environmental decision-making procedures referred to in Article 2(2); for the purposes of this definition, non-governmental organisations promoting environmental protection and meeting any requirements under national law shall be deemed to have an interest;'

Article 3(2)(b) of the SEA directive requires mandatory SEA for PPs requiring assessment pursuant to the Habitats directive (92/43/EC) (known as 'Article 6 assessment' or 'appropriate assessment' [AA]). There is no direct equivalent in the EIA directive,[5] where mandatory EIA is linked to the type of project and not the area that will be affected (Sheate et al., 2005). The Birds directive specifies which 'species' must be subject to mandatory implementation of 'special conservation measures' (Art. 4[1] and Annex I). The Habitats directive is also specific in that in Article 4 it sets out a mandatory requirement for MSs to produce 'a list of sites which have specific native habitat types' (Annex I) including 'species relating to those sites' (Annex II). Article 4 also requires the mandatory designation of sites as 'special areas of conservation' (SACs).

2.4.7 Scope (Objects that Should be Screened)

As with objects requiring mandatory assessment, the SEA directive potentially leaves much greater uncertainty concerning the objects which should be screened to identify if assessment is required. However, even with the more detailed list of projects that require screening under the EIA directive (Annex II), ambiguities have arisen in relation to the definitions of some project types, e.g. what is meant by an 'urban development project' (Sheate et al., 2005).

The screening criteria in both the EIA and SEA directives (EIA, Annex III; SEA, Annex II) require consideration of the characteristics of the object of assessment, characteristics of the location/area likely to be affected and characteristics of potential impacts/effects (Sheate et al., 2005). The 'criteria for selecting sites eligible for identification as sites of community importance and designation as special areas of conservation' are laid out in Annex III of the Habitats directive. They also require consideration of the characteristics of the location/area of such sites, as well as the degree of conservation of the habitat, global assessment of the value of the site and the size and density of the population of species on the site. The criteria relating to impacts/effects are similar in both the EIA and SEA directives. Most of the criteria are common to both directives. The only differences are that:

- The EIA directive refers to the 'complexity' of impacts whereas the SEA directive refers to 'the cumulative nature of the effects'.
- The SEA directive refers to risks to human health or the environment as an 'effect' characteristic whereas the EIA directive refers to 'the risk of accidents….' as a 'project' characteristic.[6]
- In general, the location/area criteria in the EIA directive are much more specific.
- Since the SEA directive is more recent, the EIA directive criteria do not acknowledge the SEA directive criteria.

2.4.8 Measures to be Adopted

All the directives (with the exception of the Public Participation directive) have requirements for 'measures' to be adopted/undertaken. In most directives the specific type or number of measures to be undertaken would appear to be left to the discretion of the MS, with terms such as the adoption of 'measures necessary' (WFD, Art. 4[1] and EIA directive, Art. 2[1]), establishment or implementation of 'the necessary … measures' (WFD Art. 4[1] and Habitats directive, Arts 12[1] and 6[2]), undertaking 'requisite measures' (Birds and Habitats directives, (Arts 2, 3 and 5, and Arts 12 and 13 respectively), and those [measures] 'envisaged' (SEA directive, Art. 7[2], Annex I [g] and [i]), being used.

Under the WFD, MSs are specifically required to establish and implement a whole range of measures in relation to the protection of water. Not only do the environmental objectives (Art. 4) of the WFD include implementation of a

[5] Annex III of the EIA directive does provide that areas designated under the Birds (79/409/EEC) and Habitats (92/43/EC) directives are criteria that need to be considered when screening Annex II projects, but these do not provide a trigger for mandatory assessment.

[6] The five-year EIA report (CEC, 2003a) notes, 'Risk is dealt with in a wide variety of ways and at very different levels across the EU, partly in response to the variety of geographical, geological, climate and other conditions. Risk is a screening criterion in Annex III and risk assessments appear in many EIS, and yet for most Member States risk is seen as separate from the EIA process as it is often handled by control regimes to which the EIA Directive is not applied' (para 10, Summary of findings).

range of measures (to prevent deterioration, reduce pollution, prevent or limit input of pollutants, reverse any significant upward trend in the concentration of any pollutant), but Article 11 sets out the requirement for specific 'programmes of measures' that need to be complied with. The WFD shares some elements with both the EIA and SEA directives in terms of measures that relate to the mitigation of adverse effects/impacts. All three directives refer to measures that 'prevent or reduce' impacts/adverse effects. Measures to be adopted under the Birds and Habitats directives focus on the conservation and protection of species, while the Birds directive also includes measures relating to the maintenance/preservation of habitats (Art. 3).

*2.4.9 **Exemptions** [see also 'Less stringent environmental objectives' s.2.4.22 below]*

The WFD does not explicitly state that certain 'bodies of water' are exempt or excluded from its requirements, although it does refer to 'situations' where an MS would not be in 'breach of the requirements' (Art. 4[6]), namely 'natural causes' or 'force majeure' (however, this is only for temporary deterioration of status). Also, under Article 4(4) the deadline by which MSs are expected to achieve the objectives of the WFD (i.e. 15 years after the directive has entered into force) can be extended to allow for the 'phased achievement of the objectives for bodies of water, provided no further deterioration occurs in the status of the affected body of water'. Certain conditions are required to be met before such an extension can take place. Under Article 4(5) MSs can also choose to achieve 'less stringent environmental objectives' for particular bodies of water when 'so affected by human activity … or their natural condition is such that the achievement of these objectives would be infeasible or disproportionately expensive'. Again, certain conditions must be met before this is allowed to happen.

Under the SEA directive, indirect 'exemptions' may arise as a result of different mandatory requirements for SEA applying in adjacent MSs, since the application of the directive depends upon the nature of plans and programmes produced. This could cause problems if the UK and Ireland apply SEA differently in Northern Ireland and the Republic of Ireland.

2.4.10 Assessment and Types of Effects to be Considered

The WFD, EIA, and the SEA directives all refer to 'significant effects' and 'effects on the environment', although in the case of the WFD they are referred to as 'significant adverse effects' (Art. 4[3]). However, it is worth noting that 'significant adverse effects' in the case of the WFD only relate to the designation by a MS of a body of surface water as artificial (AWB) or heavily modified (HMWB). In this context, the WFD refers to significant adverse effects on a number of areas, including the 'wider environment', 'navigation', 'port facilities', or 'recreation', etc, which are areas that may experience such effects.

Aside from the provisions of Article 4(3), the WFD is concerned with all effects that result in water bodies not achieving 'good status' by 2015. The RBD characterisation process (as outlined in Article 5) requires the collection and maintenance of 'information on the type and magnitude of the significant anthropogenic pressures to which the surface water bodies in each river basin district are liable to be subject' (Annex II, Section 1.4) and an 'assessment of the susceptibility of the surface water status of bodies to the pressures identified' (Annex II, Section 1.5). The Birds directive only mentions 'effects' in the context of the effects of marketing on the biological status of species listed (Art. 6[4]).

Both the EIA and SEA directives provide an explanation of the type of significant effects and also require effects on the environment to be identified and described. The EIA directive requires these to be assessed and the SEA directive evaluated. The SEA directive refers explicitly to 'synergistic effects', which are generally seen as a particular category of cumulative effects. Presumably, the explicit reference to synergistic effects (but not other forms of cumulative effects) is to prevent doubt.

The EIA directive refers explicitly to direct and any indirect effects, whereas there is no mention of this issue in the SEA directive (Sheate et al., 2005). Both the EIA and SEA directives require consideration of positive as well as negative effects. The Habitats directive (Art. 6[3]) refers to 'significant effect thereon' in relation to plans and projects affecting designated sites.

A key issue that emerges then from the textual analysis and the review of literature is that of applying environmental assessment, particularly SEA, to plans and programmes and even to projects (EIA) that are likely to occur under the WFD, Habitats and Birds directives, and the possible overlaps that may result. Looking specifically at the WFD, both plans and programmes are required to be produced: Article 11 requires the establishment of POMs and Article 13 requires the production of RBMPs. In addition, Article 13(5) states that RBMPs can be supplemented by 'more detailed programmes and management plans for sub-basins, sector, issue or water type'.

Would such plans and programmes then be subject to the requirements of the SEA directive? The SEA directive (Art. 3[2]) requires that environmental assessments be carried out on certain plans and programmes that are likely to have significant environmental effects. This includes those plans and programmes prepared in relation to water management. This would suggest that the provisions of the SEA directive would in fact apply to plans and programmes under the WFD. Moreover, under the SEA directive, plans and programmes not listed under Article 3(2), but which set the framework for future development consent, should be assessed by MSs for significant environmental effects, to which SEA should/should not be applied.

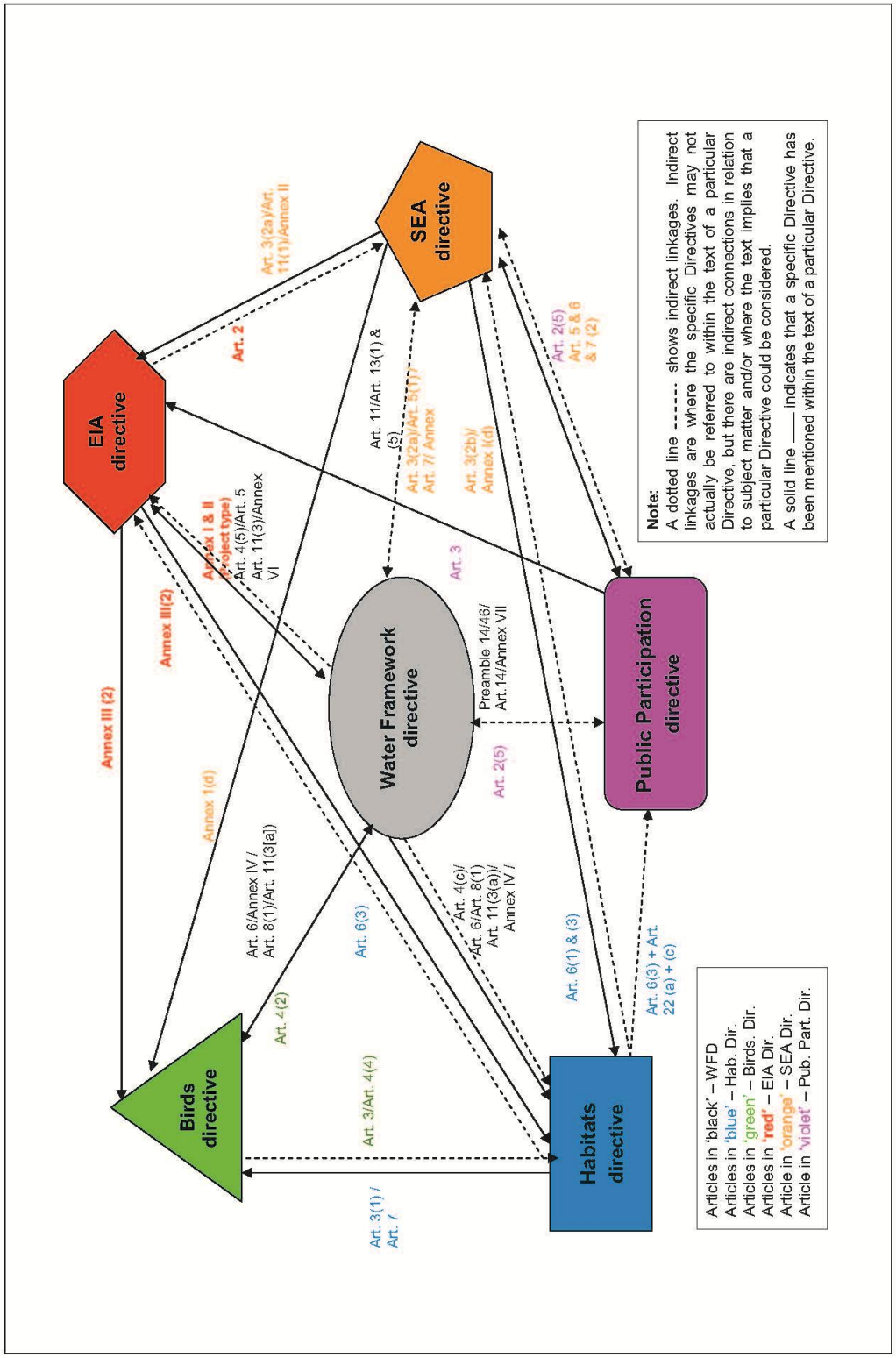

Figure 2.1: Flow diagram showing direct and indirect linkages/interactions between Directives

Table 2.1 Index of Articles in Figure 2.1 (see full report for full textual analysis of Articles)

Articles from the **Water Framework Directive**	Articles from the **EIA Directive** (as amended)	Articles from the **SEA Directive**	Articles from the **Public Participation Directive**	Articles from the **Habitats Directive**	Articles from the **Birds Directive**
To **EIA Directive**: • Art. 4(5) – Environmental Objectives • Art. 5 – RBD Characterisation • Art. 11(3) – Programme of measures (POMs) • Annex VI – Measures to be included in POMs To **SEA Directive**: • Art. 11 – POMs • Art. 13(1) & (5) – RBMPs To **Public Participation Directive**: • Art. 14 – Public information & consultation • Annex VII – Contents of RBMPs To **Habitats Directive**: • Art. 4(c) – Environmental Objectives • Art. 6 – Register of protected areas • Art. 8(1) – Monitoring • Art. 11(3)(a) – POMs • Annex IV – Protected Areas: contents of register of protected areas (PAs) To **Birds Directive**: • Art. 6 – Register of protected areas • Art. 8(1) – Monitoring • Art. 11(3)(a) – POMs • Annex IV – Content of register of PAs	To **WFD**: • Annex I – Projects subject to mandatory EIA • Annex II – Projects which may require EIA To **SEA Directive**: • Art. 2 – Application of EIA and 'another form of assessment' To **Habitats Directive**: • Annex III(2) – Screening: case by case examination selection criteria: location of projects To **Birds Directive**: • Annex III(2) - Screening: case by case examination selection criteria: location of projects	To **WFD**: • Art. 3(2)(a) – Scoping: plans & programmes subject to mandatory SEA • Art. 5(1) – Environmental report • Art. 7 – Transboundary consultation • Annex II(1) – Criteria to determine significance of effects To **EIA Directive**: • Art. 3(2)(a) – Scoping: plans & programmes which set the framework for future development consent of projects • Art. 11(1) – Relationship with other Community legislation • Annex II – Criteria to determine significance of effects To **Public Participation Directive**: • Art. 5 – Environmental report • Art. 6 – Consultations • Art. 7(2) – Transboundary consultations To **Habitats Directive**: • Art. 3(2)(b) – Scoping: effects of plan & programmes on sites • Annex I(d) – Content of environmental report To **Birds Directive**: • Annex I(d) – As above	To **WFD**: • Art. 2(5) – Public participation concerning plans & programmes To **EIA Directive**: • Art. 3 – Amendments to EIA Directive (85/337/EEC) To **SEA Directive**: • Art. 2(5) – Public participation concerning plans & programmes	To **EIA Directive**: • Art. 6(3) – Plans or projects subject to appropriate assessment To **SEA Directive**: • Art. 6(1) – Establishing conservation measures and appropriate management plans • Art. 6(3) – Plans or projects subject to appropriate assessment To **Public Participation Directive**: • Art. 6(3) – Plans or projects subject to appropriate assessment: if appropriate obtain opinion of general public before agreeing to plan or project • Art. 22(a)&(c) – Supplementary provisions: re-introduction of species and re-establishment of favourable conservation statue after proper consultation with public & promotion of education and general information To **Birds Directive**: • Art. 3(1) – Conservation of natural habitats and habitats of species: inclusion of special protection areas in Natura 2000 Network • Art. 7 – Amendments to Birds Directive: in relation to special conservation areas	To **WFD**: • Art. 4(2) – Protection of wetlands and wetlands of international importance To **Habitats Directive**: • Art. 3 – The preservation , maintenance and re-establishment of a sufficient diversity and area of habitats for all species of bird • Art. 4(4) – Avoidance of pollution or deterioration of habitats or any disturbances

The SEA directive provides certain criteria (Annex II) to assist in this process, which includes the 'relevance of the plan or programme for the implementation of Community legislation on the environment', for example, plans and programmes linked to water protection. This would appear to imply that both RBMPs and POMs, which are both directly relevant to water protection, would, if they were likely to have significant environmental effects, be subject to SEA. Alternatively, Article 3(2) could be used as a way of avoiding SEA for plans and programmes relating to water protection if the MS decided that the plan or programme had no significant effect.[7]

It is evident that both plans and programmes under the WFD could be subject to the requirements of the SEA directive, though confusion remains. In its guidance document on SEA (CEC, 2003b), the European Commission points out that it is not possible to 'state categorically whether or not the RBMP and the POM are within the scope of the SEA Directive' and that such assessments would have to be carried out on a case-by-case basis. ENTEC (2003) suggest that RBMPs might not be regarded as plans or programmes under the SEA directive as they will not be particularly detailed, but that POMs will require SEAs. As noted above, plans and programmes which are not specified under Article 3(2) of the directive could still require SEA if they set the framework for future development consent. Therefore, deciding whether RBMP and POMs set the framework for the future development consent of projects is another issue to consider (CEC, 2003b; Scott and Marsden, 2003).

Significantly, however, consultation is required 'in particular' on draft RBMPs (Art. 14) and when updating them, suggesting there is a clear 'planning' dimension to RBMPs which will influence POMs that come forward under them, i.e. will set the framework for future projects. It would seem odd for RBMPs not to be subject to SEA when consultation is required by the WFD. Importantly, SEA would provide a process through which RBMP consultation could be facilitated.

Assuming that either RBMPs or POMs (or both) will have to be subject to SEA in some form or another,[8] would the 'additional' more detailed programmes and management plans, which may accompany the RBMP (WFD, Art. 13[5]) also be subject to SEA? In addition to the SEA already being carried out on the RBMP and/or POMs? If multiple SEAs were to be carried out under the WFD, there are likely to be numerous areas of overlap. The SEA directive does, however, refer to the need to avoid duplication of assessments (Preamble Para. 15 & Arts 4, 5 & 11, SEA directive) (Fry et al., 2002). ENTEC (2003) suggests that the SEA directive 'recognises that where plans and programmes form part of a hierarchy it is acceptable to undertake the SEA at a single level in order to avoid duplication'. However, legally this interpretation is rather questionable. While the directive seeks to avoid duplication of assessment, it does not refer to a single assessment. Legally, if a plan and a related programme each meet the SEA directive criteria then both should be subject to SEA; to do otherwise would potentially be in breach of the directive, unless a 'joint procedure' is established (meeting the SEA directive requirements fully in each case).

The key consideration is that the appropriate issues should be dealt with at the most appropriate level. Therefore, strategic alternatives should be considered at the highest level first, for example, and that assessment can then inform a lower-level assessment. Consequently, multiple assessments may still be needed, but they will be assessing different aspects, so that the elements and the nature of the assessment should not be duplicated.

2.4.11 Protected Areas

The extent to which sites have been identified and classified under the Birds and Habitats directive by MSs will have a bearing on the potential for interaction with the WFD. Article 4(2) of the WFD states that where there are multiple objectives relating to a given body of water (e.g.

[7] While Article 3 (2) is ambiguous, it is generally considered that all plans listed probably do require SEA, i.e. are always likely to have significant effects on the environment (see further discussions in Sheate and Leinster, 2005; Tromans and Fuller, 2003).

[8] The UK government in August 2006 (as this research was concluding) published guidance for England and Wales on the RBMP process, including the requirement for SEA of RBMPs (Defra/WAG, 2006).

environmental objectives relating to surface waters, groundwater or protected areas), the most stringent shall apply. If there are potential conflicts over designations, it may have a bearing on what is meant exactly by 'most stringent' (the issue of 'less stringent requirements' is dealt with in more detail later in s.2.4.22). If particular uses (under the WFD) require more stringent requirements, some authors suggest 'protected zones' should be established with higher objectives set within them, and that such zones should include those areas already protected by Community legislation – for example, sensitive designated areas and areas designated for the protection of habitats or species, including Natura 2000 sites (Kallis and Butler, 2001; Barreira and Kallis, 2003).

Article 6 of the WFD requires the establishment of a register of protected areas, which includes sites under the umbrella of Natura 2000 (in relation to the Birds and Habitats directives). The SEA directive on the other hand requires environmental protection measures (international, Community and MS level) to be identified and other plans and programmes to be considered. According to Griffiths (2002) the WFD allows for, but does not require, the designation of other areas for the protection of habitats and species. However, ENTEC (2003) suggest that MS sites should include 'sites of national importance such as Sites of Special Scientific Interest (SSSIs) [in the UK], which would not have to be identified as protected areas for the purposes of the WFD'. There is potential, therefore, for the WFD to also include such sites of national importance. BirdWatch Ireland (2002) considers that enhancing and restoring wetlands is key to achieving the WFD's environmental objectives, and emphasises that *all* protected wetland sites need to be included in the register of protected areas.

This includes sites registered under the 1971 Ramsar Convention, wetland areas designated as Natural Heritage Areas (NHAs) (of which Ireland has approximately 1,200 [Teagasc, undated]), in addition to Natura 2000 sites.

'Appropriate Assessment' (AA)

Under the Habitats directive (Arts 6[3] and 6[4]) plans or projects affecting a designated site may be subject to 'appropriate assessment' (AA). The directive is not explicit on the 'type' or 'form' that this AA should take. Although not specifically referred to within Article 6(3) it is possible that an assessment in the form of either an EIA or SEA may be applied (as both 'projects' and 'plans' are mentioned within the article). However, this is far from clear, although the European Court of Justice (ECJ) is beginning to establish case law in this area (see Section 5.3.1 below). While SEA looks at the broader aspects of the environment including biodiversity, flora, fauna etc. and their interrelationships, 'appropriate assessment' under the Habitats directive focuses on the integrity of designated sites (South West Ecological Surveys et al., 2004). However, South West Ecological Surveys et al. (2004) also point out that many of the provisions for plans and programmes under the Habitats directive 'overlap with the biodiversity analysis required by the SEA Directive, and both need to feed into appropriate assessment for projects'. It is also suggested that AA could be based on the methodology used for project EIA.

Fry et al. (2002) suggest that AA would 'focus on nature conservation interests of a site or groups of sites', but also go on to suggest that 'where plans are subject to both the SEA and Habitats Directives' that the AA, in this case, 'may form part of the SEA'. There are therefore potentially strong links between the Habitats, SEA and EIA directives. Possibilities exist for carrying out an integrated form of SEA and AA resulting in a combined procedure.

European Commission guidance on SEA, also quoted in South West Ecological Surveys et al. (2004, p. 70) states that:

> … a combined procedure may be carried out provided it fulfils both the requirements of the SEA Directive and the Habitats Directive. In this case, the procedure has to include the procedural steps required by the SEA Directive, and the substantive test regarding the effect on protected sites required by the Habitats Directive.

This is self-evidently the case – if both directives apply, the requirements of both directives must be met. Consequently, Scott Wilson et al. (2006) suggest that in practice it may be better to view the AA process as somewhat separate from the SEA process. Further analysis of this issue is provided in Section 5.3 below.

2.4.12 *Elements of the Environment to be Considered*

The WFD specifies specific areas/activities, in the context of artificial or heavily modified (AWB/HMWB) water bodies, which may be adversely affected as a result of change to the hydromorphological characteristics of a body of surface water, for example the 'wider environment' (which could be left open to interpretation as to what exactly this relates to), 'port facilities', 'water storage activities', 'water regulation, flood protection, land drainage' and so on. However, the WFD is concerned with all effects that result in water bodies not achieving 'good status' by 2015.

The EIA directive requires consideration of effects on the factors listed in Art. 3, whereas the SEA directive requires consideration of 'effects on the environment' including the factors listed which, it might be argued, is a wider construction (Sheate et al., 2005). However, the EIA directive does have a comparable requirement in Paragraph 3 of Annex IV which provides that the environmental information should include 'A description of the aspects of the environment likely to be significantly affected by the proposed project, including, in particular, population'.

The Birds directive refers only to birds, their eggs, nests and habitats, which could broadly be compared to the area of biodiversity in the SEA directive and fauna and flora in both the EIA and SEA directives.

2.4.13 *Consideration of Options/Reasonable Alternatives*

Either options or alternatives are included in the WFD, EIA, SEA and Habitats directives. Under the WFD options are provided in terms of choosing the measures applicable to the RBD (Art. 11) and choosing the most cost-effective measures (Annex III[b]). The EIA directive (as amended by 97/11/EC) requires information to be provided about the main alternatives studied, including the consideration of environmental effects (Art. 5, Annex IV[2]). Under the SEA directive, Article 5(1) states explicitly that an environmental report should include 'reasonable alternatives taking into account the objectives and geographic scope of the plan or programme'. These alternatives need to be identified, described and evaluated. Some options, however, may have been foreclosed by higher-level plans (which also may not have undergone SEA).

2.4.14 *Environmental Information/Report*

2.4.14.1 Nature of the Provision of Information

It is interesting that all the directives (with the exception of the Public Participation directive, which contains no information in this regard) describe the nature of the provision of information in different ways:

- The WFD refers to the production of a RBMP which is required to contain specific information (Art. 15 of the WFD lists all MS reporting requirements including the RBMP).
- The EIA directive requires developers to supply specific information 'in an appropriate form'.
- The SEA directive specifies that an 'environmental report' needs to be prepared.
- The Birds directive requires a 'report on the implementation of national provisions'.
- The Habitats directive requires (a) 'a list of sites including information on each site' (b) 'a report on the derogations', and (c) 'a report on the implementation of measures taken'.

2.4.14.2 Baseline Information/Data Collection

Data collection is required in some form or other by all the directives (with the exception of the Public Participation directive):

- The WFD requires the gathering of data/baseline information as part of the characterisation process of the RBDs (Art. 5).
- The EIA and SEA directives require the gathering of data as part of the 'scoping' process, where a developer is required to describe aspects of the environment likely to be significantly affected by a proposed project, plan or programme (Art. 5, Annex IV, EIA & Art. 3, Annex II[2], SEA).
- The Birds directive would probably require the gathering of data in order to help classify SPAs (Art. 4).
- The Habitats directive requires the gathering of information (specified in Annex III), including the use of relevant scientific information, to help towards the selection of SACs (Art. 4).

2.4.14.3 Consultation

The issue of 'consultation' is an area for which the WFD, EIA and SEA directives all have provisions in terms of reporting. The WFD makes specific provision for a 'summary of public information and consultation measures taken, their results and the changes to the plan made as a consequence' (Annex VII[9]) to be included in the RBMP. In fact, the WFD is the only directive to explicitly require that information on public consultation is included (as part of the report requirements). The EIA and SEA directives have provisions relating to consultation on the scope of the environmental information, though neither mention consultation of the public. However, under the SEA directive this is a mandatory consultation requirement: the environmental authorities 'shall be consulted when deciding on the scope and level of detail of the information which must be included in the environmental report' (Art. 5[4]). Whereas under the EIA directive, scoping is discretionary – as a minimum MSs must implement a procedure whereby developers can ask competent authorities for an opinion on the information required (a 'scoping opinion'), in which case the competent authority must consult the developer and the environmental authorities before giving its opinion (Art. 5[2]). However, this article does go on to provide that MSs can make scoping mandatory. The EIA directive also states explicitly that the fact that an authority has given an opinion does not preclude it from subsequently requiring more information (Art. 5[2]). The SEA directive does not have a comparable provision (it might be construed that the same principle applies, although this issue is not discussed in the EU SEA Guidance (CEC, 2003b) (Sheate et al., 2005).

2.4.15 Public/Authority Involvement

The WFD places significant emphasis on consultation and public participation, particularly in relation to RBMPs. This is laid out in Article 14 of the WFD:

> 1. Member States shall encourage the active involvement of all interested parties in ... the production, review and updating of the river basin management plans. Member States shall ensure that, for each river basin district, they publish and make available for comment to the public, including users:
>
> ... *a timetable and work programme* for the production of the plan, including a statement of the consultation measures to be taken, *at least three years before* the beginning of the period to which the plan refers;
>
> *an interim overview of the significant water management issues* identified in the river basin, *at least two years before* the beginning of the period to which the plan refers;
>
> *draft copies of the river basin management plan, at least one year* before the beginning of the period to which the plan refers;
>
> *on request, access shall be give to background documents and information* used for the development of the draft river basin management plan.

2. Member States shall allow *at least six months* to comment in writing *on those documents* in order to allow active involvement and consultation.'
(Emphasis added)

The involvement of stakeholders during the preparation of the RBMP would suggest that the provisions of the Aarhus Convention were being taken into consideration. It is possible that duplication of public-participation procedures could exist between the directives, especially between the WFD and SEA. However, if the consultation and public participation procedures within the different directives, namely WFD and SEA, can be integrated in any way, social, environmental and economic issues are more likely to be addressed. This will in turn 'form the basis of sustainable water management procedures' (Carter and Howe, 2005). A coordinated response to the public consultation requirements of both the WFD and SEA directives is considered possible (ENTEC, 2003) and, indeed, would seem to be desirable.

2.4.15.1 Who to Involve

All the directives (with the exception of the Birds directive) make provision in some form or other for public/authority input. Persons/bodies to be involved are either identified as the 'public' and/or 'authorities', with some variation between directives. The WFD refers to 'all interested parties' and the 'public' (Art. 14[1]) although it is not specific on who exactly the interested parties are and what constitutes the public (s.2.4.4). This is despite the fact that the WFD dedicates a whole article (Art. 2) to definitions (Barreira and Kallis, 2003).

It also specifies that 'Member States shall ensure ... the identification of the appropriate competent authority' (Art. 3[2]).

2.4.15.2 Type of Input

The WFD promotes 'involvement and consultation', particularly 'active involvement' (Art. 14[1]). The fact that 'active public involvement' is called for does not guarantee a 'fully and inclusive participatory process' (Kaika, 2003). Moreover, by using the term 'consultation' it implies the provision of information and the receiving of comments or objections on that information (O'Sullivan et al., 1999). Indeed, interested parties are invited to 'comment in writing' on particular documents, namely, the RBMP. There are no separate requirements to involve the public with regards to POMs summarised in the management plans (Janssen, 2004). Barreira and Kallis (2003) highlight the importance of public participation in improving decision-making, and the European Commission, in its online introduction to the WFD (CEC, 2005a), considers the role of citizens and citizen groups 'crucial'.

The EIA directive also refers to the provision of 'information and consultation' (Art. 6[3]) with opportunities provided for the public to 'express comments and opinion' on information provided by the developer. Emphasis is placed on 'early and effective opportunities to participate' in 'environmental decision-making procedures' (Art. 6[4]). The SEA directive has similar requirements with authorities and the public able to 'express their opinion' on draft plans and programmes. Again, emphasis is placed on 'early and effective' opportunities for involvement. When compared with the WFD, the SEA provisions for public participation are more general in nature as they apply to a broader range and diverse type of plans and programmes (CEC, 2003b). However, by meeting the requirements of both the WFD and SEA directives, it is possible that 'simultaneous and integrated consultation and public participation procedures during the preparation and assessment of RBMP' will occur (Carter and Howe, 2005).

The Public Participation directive focuses on 'informing the public' (Art. 2[2] [a] and [d]), but also highlights the need for 'early and effective' opportunities to participate (Art. 2[2]), namely when plans and programmes are being prepared or modified. Note that this directive uses the term 'participate' rather than 'consult', which implies a more interactive process with more direct involvement of the public in decision-making processes, resulting in a 'two-way' flow of information (O'Sullivan et al., 1999).

2.4.15.3 Timescale for Feedback

The WFD is quite specific in terms of the amount of time allocated for the receipt of comments from the public. Article 14(2) explicitly states that 'at least six months' be allocated for the receipt of written comments. The Habitats directive specifies a similar timeframe with regards consultation between MSs and the Commission on the comparing of scientific data, though here the consultation period should 'not exceed six months' (Art. 5[2]). The EIA and Public Participation directives are particularly vague in this regard, stating only that 'reasonable time-frames' be provided, leaving much discretion to individual MSs. The SEA directive does not mention any timeframes.

2.4.15.4 Involvement in a Transboundary Context

Only the EIA and SEA directives consider consultation in a transboundary context in any detail, although the WFD does require that appropriate arrangements be made where river basins cover the territory of more than one MS and where IRBDs are set up as a result (Art. 3). However, there is no specific mention of 'consultation' in this regard, but where RBDs extend into the territory of a non-EU MS, then 'appropriate coordination' is required to be established (Art. 3[5]). In this regard, therefore, the WFD appears to apply also to non-MSs whereas the EIA and SEA directives apply only to MSs.

2.4.16 Role of Competent Authorities

Article 3 of the WFD outlines the provisions for the 'coordination of administrative arrangements within river basin districts'. Article 3(4) specifically calls for the coordination of the POMs for each RBD, while Article 3(5) specifies requirements for the 'establishment of appropriate co-ordination' with respect to IRBDs. The WFD, therefore, underlines coordination between competent authorities. Existing public authorities have been identified as 'competent authorities' for the purposes of the WFD in Ireland (in line with Art. 3[6]) and under the Irish Water Policy Regulations (S.I. No. 722/2003). These authorities are obliged to consult, coordinate and liaise with other public authorities, North and South, to support and facilitate coordinated implementation (DoEHLG, 2004a). The EIA and SEA directives require member states to identify competent authorities.

2.4.17 Decision-Making

Decision-making provisions are not specified within the WFD, although there is a requirement to ensure that 'appropriate administrative arrangements' are put in place (Art. 3[2]). Article 3(3) relates this to IRBDs only. The main difference between the decision-making provisions of the EIA and SEA directives is that the EIA directive requires the information, the consultation and transboundary consultation opinions to be 'taken into account in the development consent procedure'. The SEA directive, on the other hand, requires the comparable information to be 'taken into account during the preparation of the plan or programme and before its adoption or submission'.

2.4.18 *Information on Decisions*

Only the EIA and SEA directives provide detail on the type of information taken into account in reaching a decision on whether to grant or refuse development consent (for EIA) and when adopting a plan or programme (SEA). Once a decision has been made under the EIA directive there is a requirement for local authorities to 'inform the public' of the decision and make certain information available to them (Art. 9[1]), including the main reasons for the decision and information on mitigation measures. This information must also be forwarded to MSs affected (Art. 9[2]) if there are transboundary issues.

2.4.19 *Access to Judicial Review Procedure (EIA Directive Only)*

The Public Participation directive introduces a new provision to the EIA directive on access to judicial review. This has no equivalent in the SEA directive. The practical differences between the two directives on this issue will presumably depend on MSs' existing review procedures.

2.4.20 *Monitoring*

The WFD, SEA and Habitats directives all make provisions for monitoring, and possibilities for duplication exist, although Article 10(2) of the SEA directive goes some way towards avoiding this. The WFD is quite specific in its requirements for monitoring (Art. 8) and requires a 'map of the monitoring networks ... and a presentation in map form of the results of the monitoring programmes' (Annex VII[4]). Art. 8(1) requires a specific 'programme for the monitoring of water status' (Art. 8[1]) to be established. There may be more than one programme, as a separate programme is required for surface water, groundwater and protected areas. Such programmes are established so that a 'coherent and comprehensive overview of water status within each river basin district' is provided. It also requires 'details ... of the actual monitoring data gathered' (Annex VII[11]). Detailed requirements and the type of information to be monitored are laid out explicitly in Annex V.

Unlike the EIA directive, the SEA directive also makes explicit the need for monitoring of the 'significant environmental effects of the implementations of plans and programmes' (Art. 10[1]) and the environmental report is required to include a 'description of measures envisaged concerning monitoring' (Annex I[i]). Although no detailed information is provided on how such monitoring will take place, it is seen as necessary for the identification of 'unforeseen adverse effects' and for the purpose of mitigation ('remediation'). Interestingly, Article 10(2) does mention the use of 'existing monitoring arrangements' if appropriate, in order to avoid duplication. The Habitats directive does not specify that 'monitoring' is required; instead, it uses the term 'surveillance'. Article 11 requires 'surveillance of the conservation status of the natural habitats and species'. Again, no detail is provided on how exactly the surveillance should be carried out. There is also a requirement to 'establish a system to monitor the incidental capture and killing of the animal species' (Art. 12). Monitoring and evaluation in relation to management plans under the requirements of the Habitats directive are considered important nonetheless, particularly in helping to determine whether a plan is successful (Janssen, 2004).

2.4.21 *Environmental Quality Standards*

Only the WFD and SEA directive specifically mention environmental quality standards. The WFD is explicit in its requirements for environmental quality standards to be set in relation to pollution prevention and control (Preamble 40) and for certain pollutants (Preamble 42) (in relation to the pollution of water). If the objectives of the WFD, as laid out in Article 4, are unlikely to be met (as established through monitoring) MSs are required, 'as appropriate', to establish stricter environmental quality standards. Under the SEA directive, 'exceeded' environmental quality standards may be referred to when establishing whether a plan or programme is likely to have significant environmental effects (Annex II [2]).

2.4.22 'Less Stringent Environmental Objectives'

Under the provisions of Article 4 of the WFD there are a number of possible exemptions allowed from the requirement to meet overall environmental objectives. This includes exemption from the need to achieve 'good status' and the timeframe to be applied (Jones, 2001; Grimeaud, 2004; Fairley et al., 2002). In fact, the deadline for meeting environmental objectives can be extended by up to 12 years, which is considerable and may have significant consequences regarding the state of specific bodies of water over this timeframe. Less stringent environmental objectives may be set for specific bodies of water depending on a number of conditions: either it is not feasible to achieve 'good status' or costs are disproportionately expensive due to the effects of 'human activity or natural conditions'; or there is temporary deterioration in status, which is not in breach of the directive but certain conditions are not being met (Jones, 2001; Foundation for Water Research, 2005; Kallis and Butler, 2001).

2.4.23 Pollution Prevention and Control

The WFD is specific in its requirements to reduce and eliminate pollution of groundwater and surface waters. Strategies relating directly to the prevention and control of pollution are laid out in Articles 16 and 17 of the directive. The Birds directive is the only other directive to mention 'pollution'. The last sentence of Article 4 requires MSs to 'strive to avoid pollution or deterioration of habitats'. Article 2 (a) of the EIA directive allows for MSs to provide a single procedure to fulfil the requirements of the EIA directive and Directive 96/61/EC on IPPC.

2.4.24 'Human Activity'

An interesting area within the text of the WFD (Art. 5[1]) is the issue of 'human activity' and possible impacts on all water bodies in a RBD. Annex II, Section 1.4 lists potential significant anthropogenic pressures that should be assessed in each RBD. What actually constitutes a 'human activity' is not defined clearly within the directive. Grimeaud (2004) points out that MSs will need to 'identify the adverse anthropogenic pressures in terms of, among other things … significant water abstractions …'. Since such significant water-abstraction projects are likely to fall within the requirements of the EIA directive, this poses the question as to whether the review of such human activities under the WFD would coincide with EIA being undertaken for this particular activity, resulting in an overlap. Another possible area of interaction may result where information obtained for an EIA on, for example, the possible impacts from a proposed sewerage treatment works, could be fed into the river-basin characterisation process in terms of analysis of human impacts.

2.4.25 Relationship with other Community Legislation[9]

There are a number of provisions made within the WFD with regard to its relationship with other Community legislation, the most obvious being the Habitats and Birds directives. Article 6(1) explicitly states that a register(s) is required by MSs 'of all areas lying within each river basin district which have been designated as requiring special protection under specific Community legislation…'. This specific legislation is listed in Annex IV, with Part 1(v) referring directly to Directives 92/43/EEC and 79/409/EEC. The Birds and Habitats directives are mentioned again, along with the EIA directive, in relation to the 'programme of measures'. Article 11(3[a]) sets out the requirements for 'basic measures' which are 'required to implement Community legislation for the protection of water, including measures required under the legislation … in part A of Annex VI': Part A(ii) for the Birds directive; Part A(v) for the EIA directive; and Part A(x) for the Habitats directive. 'Other Community legislation' is also mentioned in Article 4(8) and (9) in the context of applying the provisions laid out in Article 4 on 'environmental objectives' and ensuring that achievement of such objectives is 'consistent with the implementation of other Community environmental legislation' and that provisions guarantee 'at least the same level of protection as the existing Community legislation'.

[9] Note: only legislation specific to this study is considered here.

The provisions in the SEA directive on the relationship with other Community legislation are broader than those in the EIA directive (Sheate et al., 2005). Article 11(1) of the SEA directive provides that SEAs under the directive are without prejudice to (i.e. do not replace) EIA or other assessments required by EC legislation. Article 11(2) provides that MSs can establish coordinated or joint procedures for SEA and assessments arising from any other Community legislation (Art. 11[2]). Article 11(3) provides that for plans and programmes co-financed by the EC, SEA must be carried out in conformity with the specific provisions in Community legislation – i.e. it explicitly states one of the possible instances of dual obligations for assessment covered generally in Articles 11(1) and (2). Section 9 of the EU SEA guidance discusses the relationship of the SEA directive with other Community legislation in more detail. In contrast, the EIA directive only explicitly mentions establishing a single procedure for EIA and one other particular form of assessment arising from EC legislation (IPPC).

2.4.26 Information, Reporting and Review

The WFD has quite an extensive requirement on information exchange, requiring a Commission report on progress in implementing the directive (the report is also required to include other specific information other than progress) at least 12 years after the directive's date of entry into force, and another such report every 6 years after that (Art. 18[1]). Another report, 'on progress in implementation based on the summary reports' submitted by MSs, is also required to be produced by the Commission at least every two years after 'dates referred to in Articles 5 and 8' (Art. 18[3]). Once this report has been published the Commission is also required (within three years) to publish an interim report 'describing progress in implementation' based on interim reports submitted by MSs. In addition to the Commission's reporting requirements, MSs are also required to report to the Commission. Article 15(1) requires MSs to send copies of RBMPs and any updates to the Commission and any other MS concerned within three months of their publication. In addition, MSs are required to submit 'summary reports' (Art. 15[2]) of RBD characterisation and monitoring programmes. An interim report 'describing progress in the implementation of the planning programme of measures' is also required to be submitted to the Commission within three years of the publication of the RBMP (Art. 15[3]).

Both the EIA and SEA directives require a Commission report on the effectiveness of the directive five years after implementation and for the Commission to make proposals (Art. 11[4], EIA directive and 12(3), SEA directive). The Birds directive requires the Commission to prepare a composite report, every three years, on the implementation of national provisions based on similar reports submitted by MSs to the Commission (Art. 12). Article 17 of the Habitats directive requires a similar composite report from the Commission every six years. In addition, Article 16 of the Habitats directive requires MSs to forward to the Commission every two years a report on derogations made to specific protection measures.

2.5 Relevant Case Law

An overview of the most relevant case law was undertaken, but is not reported in this synthesis report (see full final report for details, http://www.epa.ie/downloads/pubs.research/water).

Linehan (2005) identifies a number of relevant cases particularly in relation to the application of environmental assessment under the Habitats and Birds directives, some of which were drawn upon, while others were summarised from the ECJ judgments directly, especially the most recent cases. The purpose of this review was to provide context for further analysis and discussion in light of the case studies. It was not intended to cover all key cases for all directives.

3 Stakeholder Survey and Selection of Case Studies

Survey Approach

Task 2 (identification of situations where overlaps are possible) involved contacting a number of stakeholders (59 in total) who are either directly/indirectly involved/interested in the WFD process in Ireland. These stakeholders included government officials, WFD practitioners and academics.

Initial contact was made via a short email survey designed to gather further information on key issues of concern about overlaps and linkages between the directives, and to help in identifying potential case studies for further detailed investigation. The survey included three questions:

- Any *issues of concern* regarding the relationship of the WFD with areas such as the application of environmental assessment (EIA and/or SEA), public involvement, or protected areas?
- Any *examples of overlaps* between these directives, as applied within RBDs, which are considered to be important?
- Any *case study examples*, which illustrate potential overlaps within individual RBDs?

Twenty-one direct responses were received, plus an additional five respondents who provided further information. The results of the survey largely supported the findings from the textual analysis and the literature review, but also provided some tangible examples of where the overlaps and any potential problems might arise. Table 3.1 below summarises the key issues identified from the survey respondents (further details of respondents can be found in the full final report).

In addition, the survey allowed the identification of a number of potential case studies and a shortlist for selection in discussion with the steering group to be drawn up. Given the stage of implementation of the WFD, and the complicated interactions between the directives, three case studies were selected (Greater Dublin Water Supply, Lough Corrib, and IRBDs), each with the potential to highlight different sets of interactions between the WFD and the other directives. These are summarised in Chapter 4 below.

Table 3.1 Key issues identified by stakeholder email survey

- Confusion of the public over the different consultation processes likely to occur.
- Availability of resources for better public consultation;
- Difficulty of engaging the public.
- Sectoral interests likely to succeed in generating a negative image for WFD implementation.
- Need for 'review' of the RBMP process following adoption.
- Confusion over hierarchy of plans and programmes of measures.
- Integration of other plans e.g. development plans with the RBMP.
- Consideration of alternatives or lack of.
- How SEA will work within the WFD process.
- Possibility that preparation of RBMPs will mirror quite closely the SEA process in preparing an environmental report – cutting out duplicity and waste of resources.
- Restriction of protected areas list to European-designated sites – sites of regional/local interests could be ignored as a result.
- Possible use of same consultants in both the WFD and SEA processes in terms of preparation of environmental reports.
- Still evolving SEA process.
- Considerable sharing of resources between directives.
- Majority of existing legislation relates to human health, while WFD is largely focused on environmental issues – this could lead to misconception and result in more stringent standards than currently exist and debate during public participation.
- Lack of sites specifically designated to waterway birds.
- Lack of appropriate long-term administrative structures for comprehensive management of water resources i.e. beyond the life of current RBD management projects.
- All the requirements flowing from different directives, resulting in bulky documents and duplication of information. Especially in relation to environmental impact statements with lack of clarity and public unable to interpret information.

4 Case studies of Interaction between the WFD and other Directives

4.1 Case Study 1: Dublin Region Water Supply Major Source Development Project

4.1.1 Background

The development of sustainable water resources, particularly in the Dublin region, is recognised as presenting an enormous challenge, in which the government is investing €1 billion (Institution of Engineers of Ireland, 2005). The 'Greater Dublin Water Supply Strategic Study', commissioned in 1995 by the Department of the Environment (now the Department of Environment, Heritage and Local Government [DoEHLG]) and completed in 1996 looked at the demand for and supply of water in the greater Dublin region (Enfo, undated [a]). The objective of the study was to establish a water-supply 'master plan' for the greater Dublin region over a 20-year period. The study examined the potential to develop existing main sources of water further, and also the potential for development of new sources, including the River Shannon. It was recognised that sources furthest away from Dublin would incur high costs and involve various environmental issues (Kildare County Council, undated).

The Dublin Region Water Supply Major Source Development Project aims to provide an additional 300 million litres of water per day to the Greater Dublin Water Supply Area within approximately ten years (Ryan, pers. comm., 2006). In 2005 the DoEHLG requested Dublin City Council to procure the expertise of a service provider (in this case a consultancy) to carry out a feasibility study and preliminary report for the project, with three possible options for new sources of water: (i) River Shannon with abstractions from Lough Ree; (ii) River Barrow/Slaney in a conjunctive use with the Poulaphouca Reservoir (later dropped as unfeasible); and (iii) desalination in the Irish Sea (Dublin City Council, undated). The Feasibility Study (which includes the development strategy) aims to identify and assess these source options, which will be followed by a preliminary report (due to be submitted to the DoEHLG by end of November 2007), which will in turn recommend a major new water source (Ryan, pers. comm., 2006).

It was determined that the development of a major new water source for Dublin i.e. the development strategy, could be considered a Strategic Water Management plan or programme under the requirements of the SEA directive and regulations, so it was decided that an SEA would be carried out on the draft feasibility study (of the two remaining options). The SEA process started in January 2006 and was completed in July 2006. The environmental report (ER) was published in May 2006 (close to the end of this research). It is likely that the any feasible option would also require an EIA. The River Shannon abstraction project, for example, would entail water being abstracted from Lough Ree on the River Shannon and brought across via a pipeline to the Greater Dublin Water Supply Area, and include the development of a water-storage reservoir, pumping stations and 80 miles of transmission infrastructure. However, a solution is unlikely to be completed until 2016.

4.1.2 Relevant Links between Directives

In this case study the primary focus is on the possible links between the WFD and the EIA and SEA directives. Discussion of the key issues in relation to the various linkages is provided. Issues relating to public/stakeholder participation are also examined and the issue of 'appropriate assessment' under the Habitats directive touched on.

4.1.3 Interaction with Development Plans

One of the requirements resulting from the Dublin Water Supply development strategy process is that once the DoEHLG has approved the 'feasibility study', local authorities affected by the proposed development will be required to adopt the study formally (including the preferred option) and incorporate it into their development plans, local area plans and other relevant plans or programmes. As Sanitary (Local) Authorities are responsible for water provision in their area (under the Public Health [Ireland] Act 1878), it is likely that some reference will already have been made, within existing plans, for the need to increase water supply services in order to meet demand. Part II, Section 10(2)(b) of the Planning and Development Act 2000 requires that objectives relating to 'the provision or facilitation of the provision of infrastructure including … water supplies' be included in a development plan. As the need to supply water to the Greater Dublin Area was identified as early as 1995, it is likely that most local authorities will have already taken this into consideration (although not likely in much detail given the number of options being considered). However, as the abstraction of water from Lough Ree on the River Shannon would be quite a substantial project, there is a possibility that the incorporation of the proposed development would lead to substantial changes or 'variations' of relevant (county) development plans (CDPs), which would subsequently need to be amended.

Article 7 of the Planning and Development (SEA) Regulations 2004 requires a local (planning) authority to consider whether variations to a development plan are likely to have significant effects on the environment. The criteria to be taken into consideration when making this decision includes, among others:

> the degree to which the plan sets the framework for projects and other activities … the degree to which the plan influences other plans, including those in a hierarchy … the relevance of the plan for the implementation of European Union legislation on the environment (e.g. plans linked to waste-management or water protection) … the effects on areas or landscape which have a recognised national, European Union or international protection status … (Schedule 2A)

Figure 4.1 below illustrates possible linkages/overlaps once the WFD has been implemented fully, and a similar development project proposed within an RBD. In this 'future scenario' the basic WFD process is provided, including key stages. A number of assumptions are made for this scenario:

- Objectives within RBMPs are incorporated in CDPs.
- The main elements of the WFD process are repeated every six years in terms of review and subsequent revision.
- Development plans are produced every six years.

4.1.4 Conclusions

This case illustrates the effects that a development strategy may have on the implementation of the WFD and the implications that both processes may have on the planning process in general. A number of conclusions can be drawn:

- The 'preferred option' resulting from the development strategy will need to be adopted by relevant authorities and incorporated into CDPs. 'Variations'/revision of CDPS may result. An SEA of revised plans may be required.
- Regional planning guidelines (RPGs) may also need to be revised, to take account of the 'preferred option' before local planning authorities can adopt and incorporate the 'preferred option' into CDPs. SEA may be required for the revised RPGs. Development plans only have to 'have regard' to the RPGs and the fact that the 'preferred option' is not referred to in the RPGs would have no legal significance for the development plans (Scannell, pers. comm., 2006; Scannell, 2005).

- Although not a statutory requirement, local planning authorities may be influenced to incorporate the provisions of the RBMP (i.e. objectives and measures) into CDPs. Subsequent revisions to development plans may result in the need for an SEA of the revised plan. It is likely that incorporation of RBMP objectives/measures would coincide with the review and subsequent development of new development plans for each authority, which would help avoid the need for two separate SEAs (i.e. one SEA for 'variations' to the plan and one SEA for a 'new' plan).
- AA of the two options may be required under provisions of the Habitats directive. However, it may be more appropriate that this takes place at the project level when EIA is being undertaken of the preferred option.
- Baseline data from SEA and RBMP processes may inform EIA baseline for the proposed development. Information on impacts identified during EIA may inform future WFD characterisation processes. Monitoring data from the development project may help inform future RBMPs and POMs. Similarly, monitoring data from the WFD process may be used to inform future EIAs and SEAs, therefore helping to avoid duplication.
- Alternatives in SEA could be used to assess whether environmental objectives of the RBD are being met. The SEA would help assess whether measures being used are effective in achieving the overall objectives of the river basin management process and provide a focus for public participation in the evaluation of alternatives.
- Consultations are likely to take place for each process i.e. WFD implementation and development strategy, but because of timing it is unlikely that any direct overlaps will occur between the processes. Some key stakeholders are likely to be involved in both processes.

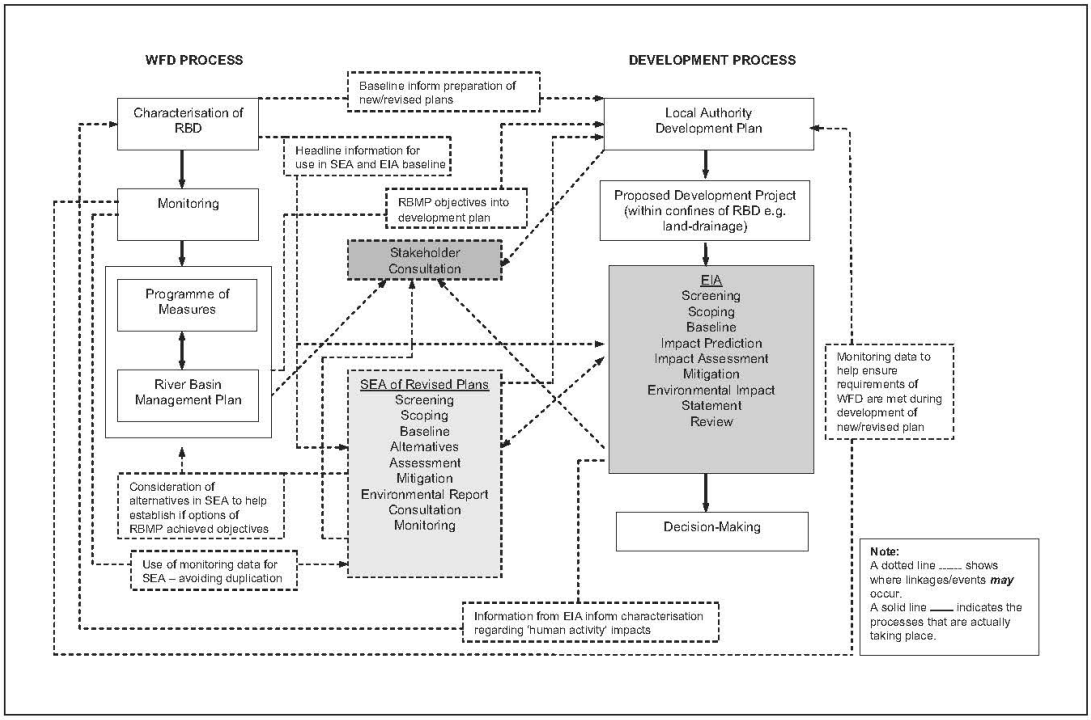

Figure 4.1: Possible linkages/overlaps following implementation of WFD

Information from RBD characterisation, particularly in relation to 'human activity' and associated impacts, could be used to inform local authority development plans, SEA and EIA baseline. Information from environmental impact statements (for proposed projects or 'activities') could be useful for informing RBD characterisation.

- EIA may be required for projects resulting from RBMPs and also from CDPs. Duplication of assessment could possibly be avoided if objectives relating to RBMPs were incorporated into CDPs.
- Information from EIAs, on impacts resulting from activities such as water-abstraction projects, could be used to inform any future assessments of 'human activity' for characterisation processes under the WFD, the results of which would be fed into revised RBMPs and POMs. Relevant measures from the EIA process relating to specific bodies of water could be incorporated into the production of draft POMs. Such measures may help to achieve specific objectives under the WFD.

4.2 Case Study 2: Lough Corrib

4.2.1 Background

Lough Corrib is the second largest lake in Ireland. Situated north of Galway city, on the west coast, the lough, which falls within the boundaries of the Western River Basin District (WRBD), was selected as a good example to illustrate possible interactions between the WFD and the Birds and Habitats directives in particular.

Lough Corrib is very important for tourism and angling. Galway County Development Plan (Galway County Council, undated, p. 76) highlights that the lough is 'one of the most important wild fisheries in Europe', attracting much in the way of tourism. The plan stresses the importance of the lough as a habitat. Angling tourism is considered a primary water-based tourism product on the lake, and extensive angling development programmes have been undertaken in the past (Ireland West Tourism, 2002). According to the Western Regional Fisheries Board (2004), a programme of fishery development continues for the Corrib system, with the objective of maintaining wild brown trout and salmon for Lough Corrib. The lough is the only designated[10] 'salmonid'[11] lake in Ireland. Water-quality standards for salmonid fishery waters need to be very stringent owing to the highly sensitive nature of salmonid fish to water pollutants (Enfo, undated [b]). The Corrib development programme has included such issues as water-quality management and surveys of all rivers and streams in the catchments (Western Regional Fisheries Board, 2004).

The importance of Lough Corrib for its rich flora, fauna and habitat type is reflected in its designation as a special protection area (SPA) under the requirements of the Birds directive, as a candidate[12] special area of conservation (cSAC) under the requirements of the Habitats directive (because it is currently classed as a 'candidate' site does not mean that the site is given any less protection than a SAC) (O'Connor, pers. comm., 2006). It is also a proposed natural heritage area (pNHA).[13] Under the Habitats directive the lough has been selected for the conservation of 13 Annex I habitats (of which six are priority types), and seven Annex II species, while under the Birds directive it has been selected for the conservation of 11 Annex I bird species (Galway City Council, 2004). The lough is the only SPA within the WRBD to qualify for international importance for the overall number of wintering waterfowl (WRBD, undated). Overall, the lough supports in excess of 20,000 waterfowl and is considered one of the top ornithological sites in Ireland (NPWS, 2004). Another important species is the fresh water pearl mussel, Margaritifera margaritifera, which is highly sensitive to pollution. This pearl mussel is protected in Ireland under the 1976 Wildlife Act and is also listed under the Habitats directive. In addition, Margaritifera margaritifera is listed on the Red Data List[14] as 'endangered' (Working Group on Characterisation and Risk Assessment, 2005; NPWS, 2004).

[10] Designated under the European Communities (Quality of Salmonid Waters) Regulations 1998 (S.I. No. 293/1988).

[11] 'Salmonid' refers to game fisheries, as opposed to coarse ('cyprinid') fisheries.

[12] Candidate SACs are sites awaiting adoption by the European Commission.

[13] Designated under the requirements of the Wildlife Amendment Act (2000).

[14] The Red Data List is a list compiled by the International Union for Conservation of Nature and Natural Resources (IUCN).

The lough is also an important water supply for east Galway and Galway city, whose populations are increasing rapidly (Ní Chionna, pers. comm., 2006). In fact, half the population of the county of Galway depends on the Lough for its domestic water supply (Galway County Council, undated). There is evidence to suggest that the surface water channels for Lough Corrib and catchment floodplains 'have been extensively modified hydrologically by drainage schemes and that water quality is also problematic for the conservation areas of the sites' (WRBD, undated, p. 11). The WRBD (undated, p. 12) also states that 'existing drainage schemes, in the … Corrib catchment, appear to have modified a number of turlough[15] habitats'.

4.2.2 *Interaction with the Birds and Habitats Directives*

The links between the WFD, Birds and Habitats directives and others are illustrated in Figure 4.2. Italicised text within the flow diagram represents elements contained within the European Commission (Natural Habitats) Regulations 1997. Various issues are identified, and where appropriate, cross-referencing is made to Case Study 1. The issues considered are not unique to Lough Corrib and could be applied to any water body designated under the Birds and Habitats directives.

4.2.3 *Conclusions*

The scenario examined (Figure 4.2) presents two processes: (i) the WFD process, as though it has already been implemented, and (ii) the conservation process, which would occur ordinarily under the provisions of the Birds and Habitats directives. A number of issues concerning the implications that each process has on the other can be summarised as follows:

- Where conservation objectives already exist for a protected area, it may be possible to incorporate these into the WFD process, therefore avoiding duplication. The main issue centres on whether the objectives being set are the most stringent. It may be necessary, for the purposes of achieving the overall objectives of the WFD, to develop new more 'stringent' objectives if existing objectives are not considered stringent enough in terms of protecting the ecological integrity of the designated site (this would apply to aquatic-based sites).
- Stringent conservation measures as established under the Habitats directive, for the protection of water-based birds, habitats and species, are thought essential in terms of helping towards the achievement of 'good ecological status' under the WFD. Such measures are likely to be incorporated into the WFD process (Art. 4[1][c]) and established in the POMs for the RBD. Where specific water bodies are affected by 'human activities', 'less stringent environmental objectives' may be set providing, inter alia, the highest status possible is achieved (not entailing disproportionate cost) and there is no further deterioration (Art. 5).
- Conservation measures for Lough Corrib should be incorporated into relevant county development plans (CDPs). There could be overlap if the same measures were included in POMs/RBMPs, which should also be incorporated into CDPs. Much depends on the timing of the different processes, but most up-to-date measures should be incorporated into CDPs.
- Monitoring in relation to aquatic habitats, undertaken as part of the RBMP process, could be used to strengthen surveillance requirements under the Habitats directive and to inform any waterways birds surveys/monitoring being undertaken.
- Monitoring data on the impacts of certain developments on water quality and protected areas could be used to inform future POMs/RBMPs as well as informing AAs carried out under the requirements of Article 6 of the Habitats directive.
- Biological/ecological data gathered during RBD characterisation could be used to inform the screening process in EIA in terms of providing information on the sensitivity of the proposed site and absorption capacity of the natural environment in relation to protected areas. Data on habitats and species under the Birds and Habitats directives could be used to inform EIA baseline evaluation, which may subsequently influence impacts monitoring (IM) and improve mitigation measures.

[15] Turloughs are habitats unique to Ireland. They are temporary lakes that flood with changes in groundwater.

- The WFD is reliant on geographical information systems (GIS) for data mapping, but a lack of adequate/suitable baseline data and digitised habitat maps and species-distribution maps may result in some important habitats/species being omitted from the RBMP process.
- There is a possibility that small-scale 'activities' may be overlooked in the RBMP process in terms of their effects on water quality and ultimately on biodiversity. 'Cumulative effects' of small-scale initiatives (for those developments already in existence and those likely to take place in the future) need to be considered to ensure accurate assessment of water quality and ensure that the most stringent objectives are set.
- Plans and projects which result from the development process or WFD process may require an AA (under the provisions of Art. 6[3] of the Habitats directive) depending on whether they are likely to affect the integrity of the designated site.
- If run in parallel with SEA, AA should be undertaken during the plan-making process i.e. for proposed plans. If carried out in this way the SEA process itself, for example during scoping, may be used to screen out the need for a formal AA if the SEA process is able to influence the draft plan to the extent that it will not affect the integrity of a designated site. There may, however, be a situation where a POM/RBMP has been published, for which an SEA has already been carried out, but since its publication new site designations have been made (under the provisions of the Habitats directives). If new SPAs or SACs are designated, the already published POM/RBMP may affect the integrity of the site and would therefore be subject to AA under the provisions of Article 6(3) of the Habitats directive. In this case, additional assessment would need to be undertaken, but information from existing SEAs could be used to inform this process, thereby avoiding duplication of effort.

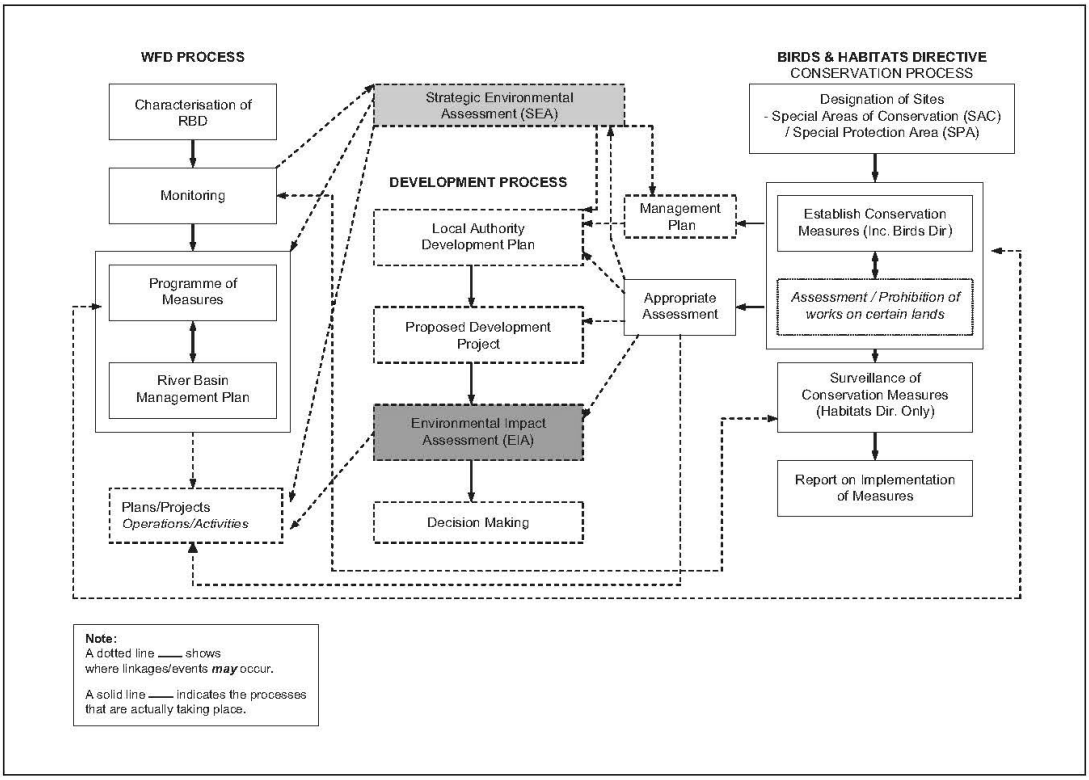

Figure 4.2: Possible linkages between the WFD and the Birds and Habitats directives

4.3 Case Study 3: International River Basin Districts – NS-SHARE Project

4.3.1 Background

The Neagh Bann RBD (NBIRBD) and North Western RBD (NWIRBD) are both designated as IRBDs under the provisions of the WFD (Art. 3[3]). These RBDs cross over between the Republic of Ireland and Northern Ireland and were chosen as a case study to help illustrate the links between various directives in relation to transboundary consultations and coordination of the different bodies involved. Northern Ireland also contains the North Eastern RBD (an RBD with no international borders) and the Shannon IRBD (SIRBD), but these RBDs are not considered in the context of this particular study.

Overall coordination for the implementation of the WFD between Northern Ireland and the Republic of Ireland is undertaken on a bilateral basis at ministerial level, between the Environment Minister in the North and the Minister for the DoEHLG in the South. A North–South Working Group[16] on Water Quality provides assistance to ministers on coordination (EHSNI, 2005).[17] Implementation of the WFD within each RBD is coordinated by the Environment and Heritage Service of Northern Ireland (EHSNI) and the relevant local authorities in the Republic of Ireland.

Under the EU Community Initiative, INTERREG IIIA Programme,[18] a cross-border water management consultancy project – the North-South Shared Aquatic Resources (NS-SHARE) project, was established to help implement the objectives of the WFD in the region. NS-SHARE is the main vehicle for delivering WFD objectives between August 2004 and March 2008 (across the three IRBDs mentioned above) (NS-SHARE, 2005a). Its main aim is to facilitate coordinated implementation and delivery of the technical tasks required by the WFD (EHSNI, undated), resulting in a harmonised approach. To aid this process a steering group was set up under NS-SHARE, which comprises representatives from government departments in the Republic of Ireland and Northern Ireland, the EPA and the coordinating authorities (McNally, pers. comm., 2006). The NS-SHARE project is being promoted and led by Donegal County Council (in the Republic of Ireland) (EHSNI, 2005).

The North Western IRBD supports a mixture of activities including boating and leisure tourism on the major lake and River Erne system, and angling and sea fisheries on the coast (the Donegal coast boasts the largest sea port in Ireland, Killybegs). The Erne system also supports the production of hydro-electric power, and water across the region supports a large agricultural area (NS–SHARE, 2005b). Intensive arable farming takes place in the Foyle (river) basin and valley, while the Erne catchment is mainly pasture and supports livestock farming. The Republic of Ireland Register of Protected Areas lists 77 SACs and 27 SPAs, which are water dependent, within the region (NS–SHARE, undated [a]).

The Neagh and Bann IRBD consists of Lough Neagh, which is the largest freshwater lake in Ireland. The lough has six major rivers flowing into it, one of which is the Upper Bann. The rivers flowing into the lough drain 43 per cent of Northern Ireland as well as parts of Co. Monaghan in the Republic of Ireland. Water drains from the lake via the Lower Bann River. Lough Neagh has several local, national and international environmental designations, including being designated as a Ramsar (international protected wetland) site. The lough supports local fishing and also provides drinking water to Belfast; sand extraction also takes place (NS–SHARE, 2005c). The portion of the NBIRBD lying within the Republic of Ireland is made up of improved pasture and supports extensive arable farming.

There are four SACs and two SPAs that are water dependent within the region, which are listed in the Republic of Ireland Register of Protected Areas (NS–SHARE, undated [b]).

[16] The working group, which was set up in 2000 includes officials (with technical expertise) from the North and South of Ireland. The group cooperates on a range of initiatives for implementing the WFD (DoEHLG - www.environ.ie).

[17] Within the Republic of Ireland the DoEHLG established a National Co-ordination Group (NCG) to coordinate and promote, at national level, implementation of the implementation of the WFD.

[18] The INTERREG IIIA Programme is designed to support cross-border cooperation, social cohesion and economic development between regions of the European Union. The Northern Ireland/Ireland Programme covers all of Northern Ireland and the six border counties and aims to address the economic and social disadvantages that can result from the existence of a border (Special EU Programmes Body (www.seupb.org/prog.htm#INTERREGIIIAOTHERCOMMUNITYINITIATIVES).

4.3.2 Interactions between WFD and the Public Participation Directive

Keeping the WFD process as the focus of this study, it is possible to identify areas where linkages in relation to stakeholder input are likely to occur (see Figure 4.3). Case Study 1 also highlights some issues in this regard. While stakeholders are encouraged to participate as early as possible within the various processes i.e. WFD, EIA and SEA, the main areas where there are likely to be direct overlaps are between the WFD and the SEA directive.

4.3.3 Conclusions

- It is possible that two RBMPs and subsequently two SEAs will be developed/carried out for each IRBD i.e. one for the Republic of Ireland portion of the RBD and one for the Northern Ireland portion of the RBD. While NS-SHARE hope to harmonise approaches as far as possible (e.g. in relation to POMs), those carrying out the SEA of the draft RBMP will also need to work closely with NS-SHARE to help avoid duplication of effort, and should give careful consideration as to how future SEAs on 'modified' RBMPs will be coordinated in an effective manner.
- RBMPs may set the framework for future plans, programmes or projects, which may require EIA, SEA and/or AA. Issues may arise where each of the two RBMPs produced for the same IRBD result in a number of plans, programmes or projects, which may be similar in nature and which require the same assessment processes, therefore resulting in duplication of effort.
- Transboundary/cross-border consultation and coordination need to take into account the different legislative/regulatory requirements of affected MSs, particularly in relation to the timing of implementation of various directives. To help prevent duplication of effort in relation to IRBDs (i.e. in the production of RBMPs and their environmental assessment), relevant bodies should work closely together. Likewise, where one state may be ahead in terms of implementing particular elements of the WFD, the other state can work closely with its neighbour to ensure that various processes are not 'reinvented' (McNally, pers. comm., 2006).
- SEA (and EIA) can help facilitate the consultation process for RBMPs and POMs since transboundary consultation is already a requirement of SEA and EIA, providing SEA is applied to RBMPs/POMs equally in both MSs.

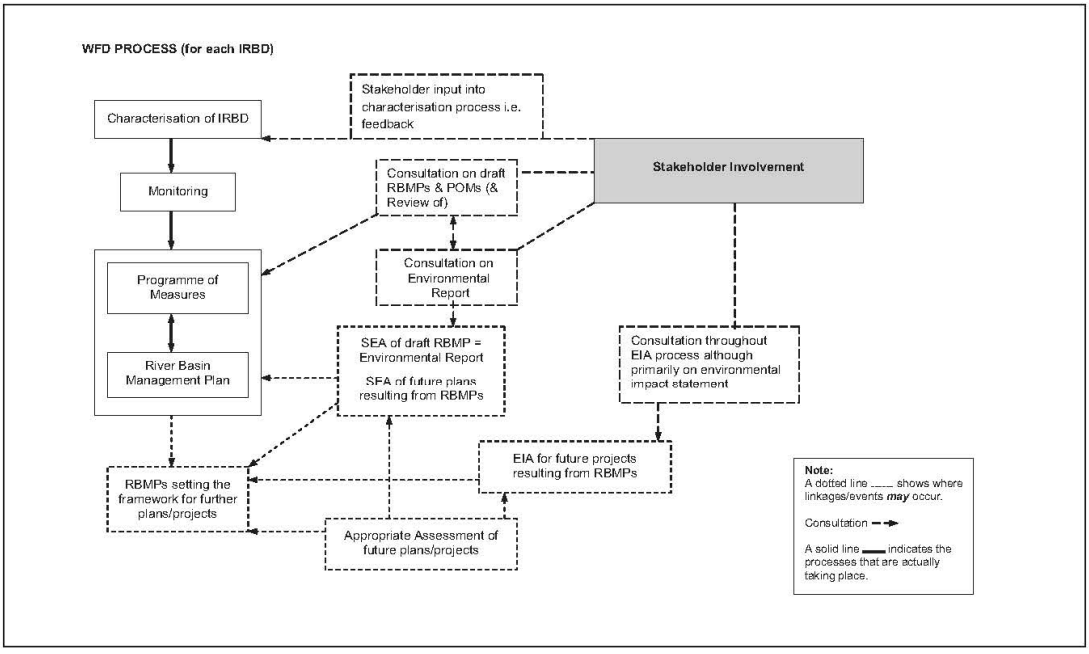

Figure 4.3: Possible linkages between the WFD and the Public Participation, EIA and SEA directives

5 Discussion

5.1 The WFD and SEA

The case studies illustrate the potential complexity of the relationship of the WFD with the other directives. However, there are obviously overlaps between the case studies in terms of the issues they cover. Some of these complexities depend upon the extent of application of the SEA directive to plans and programmes drawn up under the WFD. The SEA directive also encourages the integration of the requirements of other directives with those of the SEA directive.

The arguments for RBMPs requiring SEA are strong, and simply require close attention to the criteria laid out in the SEA directive for screening those plans and programmes that should be subject to SEA:

- RBMPs are to be produced by an 'authority' (Art. 2 [a]).
- RBMPs are required by legislative provision (MSs are required to implement the WFD which establishes this requirement) (Art. 2 [a]).
- RBMPs are plans for the purposes of water management and therefore considered likely to have significant effects on the environment (Art. 3[2] [a]). Even though there is some potential for interpretation of whether plans listed are considered automatically to have significant environmental effects (Sheate and Leinster, 2005), in the case of RBMPs, even if they were not listed they are likely to have significant effects on the environment, particularly positive effects, since that is their intention.
- RBMPs are likely to set the framework for future development consents of projects (under the EIA directive) (Art. 3 [2] [a]), via the POMs that are contained within the RBMP, i.e. they will influence the scale, nature and location of subsequent projects or activities.

Since there appears to be widespread recognition among the literature that POMs should be subject to SEA (for the same reasoning as above, only POMs set the framework directly for project EIAs), there can be little justification for not applying SEA to RBMPs as well, which set the framework for the POMs. Furthermore, there is a particularly strong argument to support the need for SEA at the RBMP level, since the WFD itself stresses the importance of public consultation on the RBMP 'in particular in the production, review and updating of river basin management plans' (Art. 14, WFD), with at least six months required for consultations. This is consistent with the requirement of the Aarhus Convention for early and effective public consultation in environmental decision-making (and reflected in the SEA directive), and highlights the important strategic planning role for the RBMP, such that the public should be consulted during the RBMP planning process. If the RBMP does not set the framework for POMs and subsequent projects/activities, what is its purpose? This also supports an important practical benefit in applying SEA to the RBMP process, since SEA already provides a consultation process (including transboundary consultation where required) which can facilitate consultation on the draft RBMP.

The issue where there has been uncertainty is the last of the four criteria above – 'setting the framework' for EIA of projects, and the desire to avoid duplication. While the SEA directive seeks to avoid *duplication of assessment* this does not mean that assessment should not be carried out at multiple decision levels. Indeed, the SEA directive (in Art. 5[2] and [3]) recognises the value of a hierarchy of plans and programmes, the need to consider appropriate detail according to the level of the plan, and relevant information from other levels of decision-making. It is therefore quite clear that there may be assessments at a number of different levels of decision-making, e.g. at

RBMP, POM and project EIA levels, but that at each level the assessment should be appropriate to that level of decision-making and will address those matters that are best addressed at that particular level.

In the case of RBMPs and POMs, therefore, while POMs are likely to be relatively detailed programmes which set the framework for potential projects, RBMPs should address the more strategic issues of the whole RBD, if – as the WFD expects,[19] – they are to be more than simply a collection of POMs. These will include broad strategic water management options that should be assessed at the RBD level before being selected for subsequent POMs, where SEA would then be more focused on alternative means of implementing the chosen options. This provides a very clear process of 'tiering' and a clear means of focusing the assessment at the most appropriate levels, which avoids duplication of assessment, but ensures that the public are consulted in an early and effective manner (i.e. at the draft RBMP stage which sets the strategic direction in terms of selection of water management options and subsequent POMs). Joint or parallel procedures for SEA of RBMPs and POMs may be possible, e.g. combining consultation processes together, so long as the SEA requirements of both are met.

5.2 WFD and Land-Use Planning

There are considerable opportunities for interaction between RBMPs and CDPs. However the precise nature of the relationship is still uncertain and will depend very much upon the nature of the types of developments that are likely to (i) emerge out of the RBMP/POMs process that are of sufficient importance to influence county development plans, and (ii) that are likely to arise through the development-planning process and have significant influence upon the RBMP/POMs process. The Dublin Water Supply Development Strategy illustrates the latter of these two examples, since it originates through development-planning processes. In this case, if the option discussed in the case study goes ahead it will need to be incorporated into CDPs (and possibly RPGs), which will in this case also influence the future RBMPs yet to be developed. When the RBMPs are adopted they in turn are likely to set in train potential development projects, via POMs, that may be subject to EIA, and may need to be incorporated into existing CDPs. In both scenarios amendments to plans may trigger a requirement for SEA. The key to avoiding excessive duplication of assessment (as opposed to appropriate types and levels of assessment of different plans and programmes) will be to seek efficiencies through the careful timing of revisions of plans so that, for instance, amendments to CDPs triggered by RBMPs or POMs can be addressed as part of the normal revision cycle of CDPs wherever possible. This may be where good coordination between RPG at the regional level and RBMPs (and for example, flood risk management plans) can help identify potential strategies and options well in advance, and so facilitate better coordination among the various levels of assessment. Since RBMPs and CDPs are ultimately the responsibilities of local authorities, there should be scope for coordination in practice.

5.3 Appropriate Assessment (AA)

The requirement for AA under the Habitats directive has brought some confusion concerning the type of assessment required and when it should be applied. In the context of the WFD it is unclear whether AA will apply to RBMPs, POMs, other sub-RBMP management plans or all of them. This is a significant issue requiring some consideration. This section sets out a tentative suggested interpretation of when AA might apply in the context of the WFD. However, it should in no way be considered a formal legal opinion, and ultimately it is for the government (DoEHLG) to consider the correct legal transposition of Article 6 of the Habitats directive and how and when AA is required in the context of the WFD.

[19] Article 13, WFD:

'1. Member States shall ensure that a river basin management plan is produced for each river basin district lying entirely within their territory.'
'5. River basin management plans may be supplemented by the production of more detailed programmes and management plans for sub-basins, sector, issue or water type, to deal with particular aspects of water management…' (Emphasis added). See also Annex VII for a list of what RBMPs should cover.

> Article 6 (3) of the Habitats directive requires that:
>
> Any plan or project not directly connected with or necessary to the management of the site but *likely to have a significant effect thereon*, either individually or in combination with other plans or projects, shall be subject to *appropriate assessment of its implications for the site in view of the site's conservation objectives*...
> (Emphasis added)

What is meant by AA is unclear, other than that it must assess the implications of the plan or project on the conservation status of the designated site. In the case of projects, EIA can probably serve the function of AA as well, since it will be in sufficient detail by virtue of being a site/location-based study (this is also the view of the European Commission [CEC, 2000]). In the case of a plan it may be that SEA is insufficient to meet the requirements of AA, depending on the nature of the plan and its strategic level. However, there is potential for considerable confusion over whether AA is required for a plan affecting a designated site with regards to a plan that is anything other than one addressing land use at a level where aspects of the plan can be physically identifiable with the location of the site in question. Some plans may require SEA, but may be very strategic sectoral plans that do not at that level establish in sufficient detail the way in which a designated site will be used or affected, which would be the trigger for AA.

Interpreting Article 6 (3)

As a site-based, conservation-focused assessment, an AA need not necessarily be particularly onerous, especially if combined with or delivered through EIA. Because the Habitats directive does not define AA, the term might be read as a 'catch-all' provision that is deliberately inclusive of all circumstances that might require EIA or SEA (on the basis that a potentially significant effect may arise) and thus is designed to ensure that environmental assessment takes place where necessary. The word 'thereon' in Article 6 (3) also implies a degree of closeness or proximity of the effects of the plan in relation to the designated site. The European Commission guidance 'Managing Natura 2000 Sites' (CEC, 2000) suggests that land-use plans, including regional plans, are likely to require AA where they are likely to have significant effects on a site. It does, however, recognise that very strategic plans or policy statements are unlikely to have such effects directly.

The argument needs to be considered that RBMPs and POMs may have a significant effect on Natura 2000 sites, i.e. the potential cannot be completely ruled out. In the light of this and based on a purposive interpretation of the Habitats directive, the WFD needs to be interpreted in light of the aims and objectives of the Habitats directive – the scope of the Habitats directive should not be narrowed by application of the subsequently legislated WFD. Accordingly, RBMPs and POMs need to be reviewed as to whether AA is required. European Commission guidance (CEC, 2000) and ECJ case law – C127/02[20] – make it clear that screening for AA is allowed, i.e. that plans not likely to have a significant effect do not need to be subject to AA. RBMPs and POMs, therefore, will need to be screened individually, since naturally the conservation objectives of each site will be different.

The words 'in view of the site's conservation objectives' suggest a narrowly focused assessment, which does not cover the whole range of environmental factors normally addressed in EIA and SEA. The critical difference here is that if the integrity of a designated site is likely to be adversely affected, the Habitats directive creates a veto on that action (Art. 6), quite unlike formal EIA or SEA. Of course, the simplest way to avoid the need for AA is to ensure that proposed plans or projects are not likely to have significant effects on Natura 2000-designated sites (SPAs and SACs). This may best be achieved through the

[20] Landelijke Vereniging tot Behoud van de Waddenzee, *Nederlandse Vereniging tot Bescherming van Vogels v Staatssecretaris van Landbouw*, Natuurbeheer en Visserij, intervener: Coöperatieve Producentenorganisatie van de Nederlandse Kokkelvisserij UA, C127/02, Para 71 (3) (a): 'The first sentence of Article 6(3) of Directive 92/43 must be interpreted as meaning that any plan or project not directly connected with or necessary to the management of the site is to be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives if it cannot be excluded, on the basis of objective information, that it will have a significant effect on that site, either individually or in combination with other plans or projects.'

earliest application of SEA and EIA and its iteration with the proposed plan or project in order to avoid the potential effects in the first place. Article 6 does not distinguish in its requirement for AA between positive and negative effects, only that the plan or project cannot go ahead if adverse effects on the integrity of the site are identified through the assessment. However, case law suggests that a 'significant effect' is one that is considered to be where the sites' conservation objectives are likely to be undermined, in other words where there are negative effects[21], and not where there might be positive effects that might support the site's conservation objectives.

For many RBMPs/POMs, they are necessarily going to have to address designated sites, and elements of them may be integral to the future management of those designated sites in terms of the aquatic management measures that may be put in place. AA may, therefore, need to be carried out for such RBMPs/POMs alongside or incorporated within SEA, and potentially for revisions/amendments to RBMPs/POMs. Whether RBMPs will require AA will depend on how strategic they are and the extent to which they are manifested at the site level. It may be that only POMs or other sub-plans or programmes of RBMPs will meet the requirement for AA. The recent ECJ judgment in Commission v. United Kingdom (C-06/04) requires the UK to apply AA to land-use plans, but caution is needed as to how much can be read across from this judgment to other sectoral plans. The ECJ had previously determined in C127-02 (above) that a requirement for AA is conditional on there being a probability or risk that there will be a significant effect. The implication is not that AA will be required for all plans that might however affect a site indirectly, but that for a plan to be required to undergo AA, the probability or risk of a significant (and adverse) effect on the site needs to be determined. That probability is, logically, likely to decline the further up the decision-making hierarchy the plan is located. So, at the POMs level it might be considered that there is some likelihood that an action or project identified in the POM affecting a specific designated site is likely to be promoted, but this may be less likely at the RBMP level where there is more scope for considering other alternatives to avoid affecting a site adversely. The probability is less because there is an intervening stage before project level. As explained, this is a tentative interpretation and one for the government and ultimately the courts to decide.

In summary, therefore, there is perhaps a lower probability of requiring AA for RBMPs precisely because they are more strategic (because they are at least one step removed from having significant effects at the designated site level). POMs are perhaps more likely to be subject to AA because they influence directly or set in train those individual actions or projects that arise from them that could affect a specific designated site directly. However, each will need to be screened for AA on a case-by-case basis.

Finally, it would appear that the Irish Habitat regulations, through the exclusion of development plans and local authority development projects from these provisions, risk being in breach of the Habitats directive in a similar way to the UK, which has now been required to amend its regulations, following the ECJ judgment (C-06/04). The Irish government may therefore wish to consider this matter with some urgency.

5.4 Stringent Standards and Objectives

There is potential for conflict between the objectives set for conservation sites designated under the Habitats and Birds directives and those objectives set under the WFD. The WFD is clear that where there is such a conflict that the most stringent objectives shall apply. The main issue then centres on whether the objectives being set are the most stringent. It may be necessary, for the purposes of achieving the overall objectives of the WFD, to develop new more 'stringent' objectives if existing objectives are not considered stringent enough in terms of protecting the

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Para. 43: 'It follows that the first sentence of Article 6(3) of the Habitats Directive subordinates the requirement for an appropriate assessment of the implications of a plan or project to the condition that there be a probability or a risk that the latter will have significant effects on the site concerned.

[21] C-127/02, Para. 47:

> 'So, where such a plan or project has an effect on that site but is not likely to undermine its conservation objectives, it cannot be considered likely to have a significant effect on the site concerned.'

ecological integrity of the designated site (this would apply to aquatic-based sites). In the case of Lough Corrib, conservation measures should be incorporated into relevant CDPs and these could overlap if the same measures are included in POMs/RBMPs, which should also be incorporated into CDPs. Much depends on the timing of different processes, but most up-to-date measures should be incorporated into CDPs. SEAs of CDPs are required to take into account other plans and programmes, including RBMPs.

To ensure accurate assessment of water quality and setting of appropriate stringent objectives, it is necessary to consider 'cumulative effects' of (smaller-scale) human activities. Cumulative effects also need to be considered as part of the WFD objective setting and in the identification of key water management issues for consultation in June 2007, prior to the first RBMPs/POMs being produced.

In the case of Lough Corrib (s.4.2) there is a strong argument for establishing 'stringent' standards/objectives because of the vulnerability of certain species dependent on high water quality. Even though there has been some modification of the water body by human activity, exemptions under the WFD cannot be applied to protected areas. Stringent conservation measures established under the Habitats directive, for the protection of water-based birds, habitats and species, are likely to be essential in helping towards the achievement of 'good ecological status' under the WFD. Such measures are likely to be incorporated into the WFD process (Art. 4[1][c]) and established in the POMs for the RBD. The WFD therefore provides an additional institutional mechanism for promoting better water quality for conservation purposes.

5.5 Information and Baseline Data

The potential for synergy in terms of baseline data collection across the assessment processes (EIA, SEA, AA), and RBMPs and POMs is evident. Baseline data from SEA, RBMP and Habitats conservation processes may inform EIA baseline for proposed developments at the project level. Information on impacts identified during EIA may inform future WFD characterisation processes. Information from EIAs, on impacts resulting from activities such as water-abstraction projects, could be used to inform any future assessments of 'human activity' for characterisation processes under the WFD, the results of which would be fed into revised RBMPs and POMs. Information on assessment of effects of 'human activity' within RBDs and information on impacts identified during EIAs may also influence planning processes (CDPs, RPG) and strengthen protection of the environment overall.

Relevant measures from the EIA process relating to specific bodies of water could be incorporated into the production of draft POMs. Such measures may help to achieve specific objectives under the WFD. Information from RBD characterisation, particularly in relation to 'human activity' and associated impacts, could be used to inform local authority development plans, SEA and EIA baseline.

Availability of sharing such information between various bodies is considered essential and efforts at establishing data repositories or observatories and regular state-of-the-environment reporting will help ensure much greater efficiency in data collection for WFD purposes and for assessment purposes. Experience in SEA is highlighting the need to undertake baseline data collection in as an efficient and focused way as possible. Baseline data collection is often the most time-consuming part of any assessment process and the ability to go to centralised repositories of data will make the assessment processes far less onerous. The centralised collection of environmental impact statements (EISs) from EIAs and ERs from SEAs, and making them available via the internet, will also help ensure that knowledge is not lost, and that assessments are building on what has gone before. Since the WFD characterisation, planning, implementation and monitoring processes, and EIA, SEA and AA processes are all very data dependent, it is essential that synergies are built upon.

The Environmental Data Exchange Network (EDEN) (EPA, 2006) is being coordinated in Ireland by the EPA and the Local Government Computer Services Board to make available in one place all the data that are available on environmental issues, and to:

- ensure that environmental data are more readily available to authorities, agencies and other bodies;
- create a manageable common approach to environmental information exchange;
- enhance potential for data integration;
- reduce overall costs in data exchange; and
- introduce environmental data standards across a broad spectrum of data.

The outputs resulting from the implementation of the WFD, EIA, SEA, Birds and Habitats directives identified above should provide importance sources of data for EDEN.

5.6 Consultation/Coordination

Consultations are likely to take place for WFD, SEA, and EIA processes, but these may not necessarily coincide in terms of timing, e.g. in the case of Dublin Water Supply this seems unlikely. However, the same stakeholders may well be involved in multiple processes (e.g. WFD, CDP, development projects) and so efforts will be needed to try to minimise consultation fatigue among key stakeholders. NGOs and statutory agencies, for example, are likely to be working on limited resources and unable to allocate time and staff to all consultation opportunities available. This means that many organisations will end up prioritising which planning processes they engage in, and to what extent. Effort at engaging stakeholders early and effectively in decision-making (in line with the Aarhus Convention) is likely to be beneficial since engagement in the strategic direction of planning processes will help ensure there is more consensus on potential measures to be taken, rather than risk of conflict when specific measures are brought forward at a later stage.

Consultation processes under the WFD have already started (see, e.g. SIRBD, 2006), beginning with the publication of the timetable and work programme for the development of RBMPs by June 2009. The WFD establishes a clear timetable for consultation on RBMPs. The national WFD regulations have established deadlines which are generally six months ahead of the formal WFD deadlines. In each RBD in Ireland consultation will therefore be required in:

- June 2007 – publication of an overview of significant water management issues (SWMI, with at least six months for consultation).
- June 2008 – publication of draft RBMPs (with at least six months for consultation).
- June 2009 – publication of final RBMPs.

This timetable means that SEA requirements for RBMPs – if they are to help facilitate consultation processes – need to be put in place urgently, since the June–December 2007 consultation requirement on key water-management issues would equate to the scoping stage in SEA where, at the very least, the environmental authorities need to be consulted on its scope. Public consultation will be required at least on the SEA environmental report alongside the draft RBMP/POMs. It would be most effective and practical that both the WFD and SEA elements are coordinated fully. Mechanisms need to be put in place to ensure coordinated action and the sharing of information between relevant authorities and across departments to help ensure that environmental protection is integrated effectively into policies and plans.

In the case of the IRBDs it is possible that two RBMPs and subsequently two SEAs will be needed for each IRBD i.e. one for the Republic of Ireland portion of the RBD and one for the Northern Ireland portion of the RBD. This does seem to contradict the very idea of an international river basin as a means of ensuring integrated river basin management, but pragmatically may be the only way in which different institutional structures in each MS either side of the border can deliver on the WFD in these circumstances. Close coordination and collaboration, however, will be essential not just to avoid duplication of effort, but to ensure coherent RBMPs/POMs are delivered. For example, as RBMPs may set the framework for future programmes or projects, which may require SEA, EIA and/or AA, each of the two RBMPs produced for the same

IRBD may result in a number of programmes or projects, which may be similar in nature and which require the same assessment processes.

Alongside the assessment processes transboundary/cross-border consultation and coordination (for RBMPs/POMs and SEA/EIAs) need to take account of the different legislative/regulatory requirements of the two MSs, particularly in relation to the timing of implementation of the various directives, and indeed compliance with those directives. For example, the UK has already decided that SEA will apply to RBMPs/POMs (Defra/WAG, 2006). If one MS is not fully compliant with a directive, and the other is, this is likely to cause problems in agreeing a coherent approach across IRBDs. This suggests that Ireland and the UK should keep abreast of ECJ judgments affecting other countries to determine if they have implications for their own implementation.

5.7 Monitoring

In the same way as there are synergies in baseline-data collection, so there are potential synergies in the monitoring requirements and activities generically under the WFD, Birds and Habitats directives and SEA (and indirectly EIA, as monitoring may take place even though it is not a formal requirement of the EIA directive). Some examples of potential synergies are given below, but this might need to be the subject of a more detailed study examining potential data and monitoring synergies among these directives, particularly in the context of developing data observatories and state-of-the-environment reporting and in the context of the EDEN data management project mentioned in the context of baseline data above (Section 5.5). Examples include:

- Biological/ecological data gathered during RBD characterisation could be used to inform the screening process in EIA (for ordinary development projects, not just those emerging from RBMPs/POMs) in terms of providing information on the sensitivity of the proposed site and absorption capacity of the natural environment in relation to protected areas. Data on habitats and species under the Birds and Habitats directives could be used to inform EIA baseline evaluation, which may subsequently influence IM and improve mitigation measures. Information collected through EIA, SEA and the Birds and Habitats directives could be fed into new or revised development plans which would help to inform future RBD characterisation in terms of the provision of information on future pressures for a specific area.
- River basin monitoring programmes could be used for the purposes of monitoring in SEAs and for ensuring that measures within the RBMP are being incorporated sufficiently into local authority development plans. This would help strengthen water-resource issues within SEA and development planning. Monitoring in relation to aquatic habitats, undertaken as part of the RBMP process, could be used to strengthen surveillance requirements under the Habitats directive and to inform any waterways birds surveys/monitoring being undertaken. Information from survey programmes undertaken outside the requirements of the WFD and Birds and Habitats directives could be used to support new WFD monitoring programmes.
- Monitoring data on the impacts of certain developments on water quality and protected areas could be used to inform future POMs/RBMPs as well as informing AAs carried out under the requirements of Article 6 of the Habitats directive. Data gathered on activities that may cause disturbance to designated sites under the Habitats directive, and their associated impacts, could also be fed back into the RBMP process and subsequently used to update and inform development plans and their policies.

The WFD is very reliant on GIS, but a lack of suitable data may influence the setting of standards for protected areas under the WFD, which could in turn affect the allocated or achievable 'status' of a particular body of water. A lack of data may also mean that small-scale 'activities' and potential cumulative effects may be overlooked in the RBMP process in terms of their effects on water quality and ultimately on biodiversity.

5.8 Forthcoming Legislation Relevant to this Study – Floods Directive

The European Commission first proposed an EU action on flood-risk management on 12 July 2004 in the Commission Communication on 'Flood risk management; flood prevention, protection and mitigation' (COM[2004]472) (CEC, 2004). The Commission developed a proposal for a directive, including extensive consultations with stakeholders and the public during 2005, with the final internet-based consultation taking place between 20 July and 15 September 2005. Findings of the final consultation showed that 'the approach proposed by the Commission was very broadly endorsed' (CEC, 2005b).

On 18 January 2006 the Commission adopted its proposal for a directive of the European Parliament and of the Council on the assessment and management of floods (COM (2006)15 final of 18.1.2006) (CEC, 2006a). The proposal creates an EU framework for flood-risk management that is closely related to the WFD. The proposed directive aims to help MSs prevent and limit floods, their damaging effects on human health, the environment, infrastructure and property via a three-step process. This involves a preliminary flood-risk assessment of river basins and associated coastal zones, and where real risks of flood damage prevail, zones will be subject to flood-risk maps and flood-risk management plans focusing on prevention, protection and preparedness (CEC, 2006b).

The European Council agreed to adopt a common position on the draft Floods directive in June 2006 (Council of the EU, 2006)[22] in readiness for a Second Reading of the draft directive later in 2006. The draft Floods directive is therefore another potential directive that will interact with the WFD, EIA, SEA, Birds, Habitats and Public Participation directives, and so will need to be considered in any future efforts to coordinate procedures among the directives. In Ireland, one effect would be to make flood-risk management plans statutory plans for the purposes of the SEA directive, and therefore requiring SEA.

Clearly, these plans will have the potential for interaction with RBMPs/POMs and with CDPs and RPG, all of which may be subject to SEA and/or AA, adding a further level of complexity that should be taken into account when seeking to develop coherent approaches to water- and land-use planning processes.

The first application in Ireland of SEA to flood risk management plans has been commissioned (late 2006) by the Office of Public Works with respect to the Lee Catchment in Cork, and will provide an opportunity to review these potential interactions. Following the discussion above, which brings together the key findings of the various tasks undertaken, a number of conclusions and recommendations (R1–13) are made. Given the timetables for implementing the WFD most of the recommendations made are urgent or need action in the short term.

[22] Council of the European Union (2006), Press Release 192, 2740th Council Meeting, Environment, 27 June 2006. Available from http://www.eu2006.at/en/News/Council_Conclusions/2706Environment.pdf [Last accessed 24/11/06].

6 Conclusions and Recommendations

6.1 The WFD and SEA

All RBMPs and POMs will need to be screened for SEA, but prima facie both would appear to have the potential to meet the four key SEA directive criteria. There is considerable confusion among those involved in implementing the WFD as to whether SEA will apply to RBMPs and/or POMs. The view from this research is that both RBMPs and POMs should be subject to the SEA directive, recognising that each will need to assess different issues at their respective levels. The timetable for implementing RBMPs, and the six-month minimum consultation requirement at each stage, means that SEA needs to be introduced into the RBMP process with sufficient time before consultation on significant water-management issues in June 2007 (which would equate to the scoping stage of SEA), i.e.:

- significant water management issues by June 2007;
- draft RBMPs by June 2008; and
- final RBMPs published by June 2009.

Clear guidance, perhaps in the form of a circular letter, is therefore needed at the earliest opportunity (see also R1 and R2 below). Principally, such guidance would focus on:

- the need to undertake SEA on RBMPs and POMs;
- who is responsible for undertaking the SEAs;
- the appropriate synchronising of SEA and RBMP processes (e.g. SEA scoping at the time of the SWMI reports);
- the appropriate consideration of alternatives (which need to be considered as early as possible in the SEA process); and
- how the SEA process can help facilitate public involvement in the RBMP consultation process.
- It is recognised that detailed guidance on specific issues will depend on a clear understanding of the content of RBMPs and POMs which is only now beginning to happen.

Recommendation 1

Both River Basin Management Plans (RBMPs) and Programmes of Measures (POMs) should be made subject to the SEA directive. DoEHLG needs to issue guidance on applying the SEA regulations to RBMPs and POMs at the earliest opportunity.

Recommendation 2

DoEHLG should ensure that SEA guidance on RBMPs and POMs clarifies where responsibility for SEA lies; and promotes the positive benefits of integrating SEA and the RBMP/POMs processes.

6.2 WFD and Land-Use Planning

The potential interactions between RBMPs and CDPs are significant. The exact nature of the relationship will depend upon the nature of the types of developments that are likely to:

1 emerge out of the RBMP/POMs process that are of sufficient importance to influence county development plans; and
2 arise through the development planning process and have significant influence upon the RBMP/POMs process.

There is, therefore, potential for two-way traffic between RBMPs/POMs and CDPs, one potentially bringing about the amendment of the other where proposals or developments are of such significance as to require revision or amendment of the other plan. Amendments to plans may trigger a requirement for SEA and projects coming forward under RBMPs/POMs or via CDPs may trigger EIA. There is potential therefore for overlap or duplication of assessment, but also for positive synergy across assessment levels. Careful timing of revisions of plans will be needed to reduce the potential for duplication of effort, e.g. amendments to CDPs triggered by

RBMPs/POMs should be addressed as part of the normal revision cycle of CDPs wherever possible. Coordination between RPG at the regional level and RBMPs (and also flood-risk management plans) could help identify potential strategies and options well in advance, and so facilitate better coordination among the various levels of assessment. Since local authorities have responsibility for land-use planning and WFD implementation, some coordination should be possible.

Recommendation 3

DoEHLG should issue guidance to local authorities and RBDs on the relationship between RBMPs/POMs and county development plans and regional planning guidelines, to promote effective coordination between the WFD and land-use planning and assessment processes, including timing of revisions.

6.3 Appropriate Assessment (AA) and RBMPs/POMs

The relationship between RBMPs, POMs and AA under the Habitats directive will require legal clarification by government. The arguments outlined in this research suggest that POMs are likely to be subject to AA, but there may be more of a question as to whether RBMPs should be. It is difficult in the absence of any RBMPs having yet been produced to know exactly what these plans will look like, but on the basis of the legal requirements in the Habitats directive, RBMPs are clearly meant to provide the strategic framework for subsequent plans or programmes of measures. As such, the probability or risk of the RBMP affecting a specific designated site may possibly be less than that for a POM. However, both RBMPs and POMs will need to be screened for AA on a case-by-case basis. Since it would also appear the government may be risking potential breach of the Habitats directive by not requiring AA for land use plans, government will need to consider amending the regulations and issuing new guidance on AA as soon as possible. Given the timetable for RBMP/POMs production, and the need for SEA (R1 and R2 above), the same timescale needs to apply to clarification on AA, given the potential for interaction between the WFD, SEA and Birds and Habitats directives. If AA is to be undertaken it needs to be integrated properly with the WFD and SEA processes.

Recommendation 4

DoEHLG should consider the issue of 'appropriate assessment' and RBMPs/POMs and the possible need to amend the Habitats regulations and issue guidance in relation to requiring AA for land-use plans as soon as possible.

6.4 Stringent Standards and Objectives

In the context of objective setting under the WFD, there is a need to consider 'cumulative effects' of (smaller-scale) human activities to ensure accurate assessment of water quality and the setting of appropriate stringent objectives. Cumulative effects are central to SEA, although experience of undertaking such assessments is rather limited (though developing). The application of SEA to RBMPs and POMs will facilitate the assessment of cumulative effects as part of those processes, and will help identify WFD objectives in the RBMP, as well as providing information for further iteration in the future. However, cumulative effects also need to be considered as part of the WFD objective setting and in the identification of key water management issues for consultation in June 2007, prior to the first RBMPs/POMs being produced.

Recommendation 5

Cumulative effects should be addressed explicitly as part of the WFD implementation strategy, and will need to be coordinated by the WFD National Coordination Group. The integration of RBMP production with SEA will facilitate this.

6.5 Information, Baseline Data and Monitoring

From this research and especially the case studies it is clear that data issues remain uppermost in terms of the challenges faced by RBDs and conservation bodies implementing the Birds and Habitats directives. Baseline data from different processes, particularly in relation to conservation, need to be improved as a matter of urgency both in terms of quality of data gathered and their availability.

Directly linked to this is the need to ensure availability of adequate resources for the development of digitised data on water-based birds and habitats so that they can be used alongside the WFD process and inform RBD characterisation. Without such data, important birds and habitats may be excluded from the RBMP process. GIS data from monitoring processes, particularly under the WFD, but also from Birds and Habitats directives and in relation to EIA and SEA, should be collated at a national level for use in other decision-making processes. The EDEN project is a key step in this direction.

Recommendation 6

> DoEHLG and EPA should ensure the EDEN data management project makes full utilisation of the outputs from the application of the WFD, EIA, SEA, Habitats and Birds directives and takes into account the data needs of these key directives in prioritising investment in GIS data-collection and management systems.

6.6 Consultation and Coordination

6.6.1 RBMPs, Consultation and SEA

As already identified in R1 and R2, the consultation requirements on the RBMPs are quite demanding and consultation strategies need to be put in place well in advance of drafting the RBMPs/POMs. **SEA can help facilitate this if it is introduced into the RBMP process as early as possible**. Aside from and alongside SEA (R1, R2) there is a need for consistent ***methods*** of involving 'interested parties' across the RBDs i.e. consultation measures adopted for the WFD process should be the same across RBDs. While public participation measures are being coordinated by the WFD National Public Participation Working Group, it would be helpful for information and/or guidance concerning these measures to be made available to the public via the internet, and also that such guidance should promote SEA as a means of helping deliver public participation in the RBMP process. Formally, this will involve at least consulting the environmental authorities during SEA scoping and the wider public and stakeholders on the SEA Environmental Report alongside the draft RBMP/POMs.

Recommendation 7

> Specific information/guidelines about the consultation process and methods to be adopted for RBMPs should be produced by DoEHLG/WFD National Public Participation Working Group and should promote the SEA process as the mechanism for helping to deliver the public consultation requirements of the WFD.

6.6.2 Consistency in Approach

It is also clear that coordination can extend to the role of individual authorities since river basin authorities also have competence for agriculture, industrial pollution, land-use planning etc. There should be scope for stronger coordination within authorities, e.g. in dealing with WFD and SEA, and across authorities where RBDs cover multiple administrations (i.e. the competent authorities responsible for managing RBDs are the local authorities acting jointly). In the context of IRBDs, there is a strong case for the continued existence of a coordinating body e.g. NS–SHARE, for transboundary issues, beyond the current RBMP process.

There may be useful lessons to learn from approaches to implementing the WFD from other MSs and this may be best achieved by close liaison with colleagues in the relevant environmental authorities through the various EU WFD working groups and through targeted commissioned research.

Recommendation 8

DoEHLG should issue further guidance on coordinating within and across authorities the implementation of the WFD, SEA and land use planning in particular. This could be part of the same guidance referred to in R1 and R2.

Recommendation 9

The government should continue to give high priority to ensuring appropriate Ireland/UK coordination in relation to implementation of the WFD, especially in relation to river basins shared with Northern Ireland. An extension in the timeframe of the NS SHARE project is recommended.

Recommendation 10

DoEHLG/EPA should commission targeted research to explore possible lessons from different approaches of other EU member states with regard to implementing the WFD, for example with respect to coordination with land use planning, cross-border cooperation, and integration with other directives.

6.6.3 Education and Awareness Raising

A clear message coming from a number of the interviewees for this research is that many organisations are unfamiliar with the potential implications of the WFD, or if they are, they are far less familiar with its potential interactions with other directives such as the EIA/SEA directives or the Birds/Habitats directives. There is a clear opportunity here for the EPA and/or DoEHLG to carry out an educational and awareness raising role in organising facilitated workshops for authorities, agencies and NGOs on the WFD and other directives. A first step in relation to this project may be a workshop to present and discuss the findings from this research to stakeholders. However, from the experience to date, it would seem that such a workshop should be the start of a longer campaign strategy to engage with stakeholders beyond those immediately involved in delivering the WFD, particularly to reach across to those engaged in conservation management and land-use planning.

For example, a facilitated workshop should be run within each RBD on how the various directives will interact with and affect the WFD process (this should be done before drafting of RBMPs begins). These workshops should:

Help authorities to become aware of the different processes and implications for river basin management planning (currently, knowledge tends to be on their own area of expertise with little knowledge or understanding of the 'wider' picture and other processes which affect them).

Help interested parties i.e. stakeholders make informed decisions. Consultation and subsequent feedback is unlikely to be effective if stakeholders do not understand the issues in the first place.

It is also suggested that a national workshop be held with representatives of each RBD and other bodies/stakeholders involved, after the first RBMPs have been produced to discuss how the application of SEA and/or other processes were addressed and carry out a SWOT (strengths, weaknesses, opportunities, threats) or similar analysis so that lessons may be learnt and more coordinated/harmonised approaches adopted.

Recommendation 11

DoEHLG and/or EPA should consider organising a facilitated workshop on how the various directives considered by this research will interact and affect the WFD process. This will need to take place at the earliest opportunity in order to influence the RBMP planning process.

Recommendation 12

A national workshop should be organised by DoEHLG/EPA once the first RBMPs have been produced to learn from the experience of how SEA and other directives (e.g. Habitats and AA) have been addressed.

6.7 Forthcoming Legislation – Floods Directive

In order to take account of its likely implications as early as possible during the implementation of the WFD and in revisions to CDPs and RPG, further research along similar lines to this study is needed. As the proposed Floods directive advances through the European Parliament and Council, the text can be compared to those directives studied here to highlight potential areas of overlap, similarities and differences.

Reflections following the first application of SEA to the Flood Risk Management Plan of the Lee Catchment (late in 2006) will provide an important opportunity to review this process.

Recommendation 13

As the proposed Floods directive progresses, the EPA should undertake further research to examine the potential interactions of the proposed Floods directive with the six directives examined in this research.

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Acronyms

AA – appropriate assessment

AWB – artificial water body

CDM – an engineering consultancy (http://www.cdm.com/)

CDP – county development plan(s)

DoEHLG – Department of Environment, Heritage and Local Government

DoENI – Department of Environment Northern Ireland

ECJ – European Court of Justice

EDEN – Environmental Data Exchange Network

EHSNI – Environment and Heritage Service Northern Ireland

EIA – environmental impact assessment

EIS – environmental impact statement

ER – environmental report

ENTEC – Environmental and engineering consultancy - http://www.entecuk.com/

ERBD – Eastern River Basin District

EU – European Union

GIS – geographical information systems

HMWB – heavily modified water body

IBA – Important Birds Area

IPPC – Integrated Pollution Prevention and Control

IRBD – International River Basin District

IWC – Irish Wildbird Conservancy

MS(s) – member states

NBIRBD – Neagh Bann International River Basin District

NCG – National Co-ordination Group

NGO – non-governmental organisation

NHA – Natural Heritage Area

NPWS – National Parks and Wildlife Service

NS-SHARE – North South Shared Aquatic Resource (INTERREG IIIA project)

NTCG - National Technical Coordination Group

NWIRBD – North Western International River Basin District

pNHA – Proposed Natural Heritage Area

POMS – Programme of Measures

PP – Plans and Programmes

RAs – regional authorities

RBD(s) – river basin district(s)

RBMP(s) – river basin management plan(s)

RPG – Regional planning guidelines

cSAC – Candidate Special Area of Conservation

SAC – Special Area of Conservation

SEA – Strategic environmental assessment

SIRBD – Shannon International River Basin District

SPA – Special Protection Area

SWAN – Sustainable Water Network

WFD – Water Framework directive

WRBD – Western River Basin District

Appendix 1

Table A 1 Comparison of the texts of the six directives

Issue	Water Framework directive	EIA directive[23]	SEA directive[23]	Public Participation Directive	Birds directive	Habitats directive
Title	Directive... establishing a framework for Community action in the field of water policy	Directive... on the assessment of the effects of certain public and private projects on the environment	Directive... on the assessment of the effects of certain plans and programmes on the environment	Directive... providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment...	Directive... on the conservation of wild birds	Directive... on the conservation of natural habitats and of wild fauna and flora
Objectives	Art. 1 – specifies 'purpose' of the directive (Art. 1(e) mentions 'achieving the objectives of relevant international agreements') Art. 4 – details 'environmental objectives' in relation to the operation of the programme of measures	Although Art. 1(5) refers to 'the objectives of this Directive' these are not explicitly set out	Statement of objectives (first part Art. 1)	Statement of objectives – Art. 1	No specific statement of objectives, although Art. 1 outlines what the directive relates to	No specific statement of objectives, although Art. 2(1) refers to the 'aim' of the directive
Definitions	Art. 2: - 'surface water' - 'groundwater' - 'inland water' - 'river' - 'lake' - 'transitional waters' - 'coastal water' - 'artificial water body' - 'heavily modified water body' - 'aquifer' - 'body of groundwater' - 'river basin' *Contd on next p. 52...*	Art. 1(2): - 'project' - 'developer' - 'development consent' - *'the public'* - *'the public concerned'*	Art. 2: - 'plans and programmes' - 'environmental assessment' - 'environmental report' - 'the public'	Art. 2(1): - 'public'	No definitions provided	Art. 1: - 'conservation' - 'natural habitats' - 'natural habitat types of Community interest' - 'priority natural habitat types' - 'conservation status of a natural habitat' - 'habitat of a species' - ' species of Community interest' *Contd on next p. 52...*

[23] The text in these two columns is taken from a comparison between the EIA and SEA Directive in the following study: Sheate, W., Byron, H., Dagg, S. and Cooper, L. (2005) *The Relationship between the EIA and SEA Directives – Final Report to the European Commission*, Imperial College London Consultants, August.

* Text in italics show amendments introduced by the 'Public Participation directive'.

Issue	Water Framework directive	EIA directive	SEA directive	Public Participation Directive	Birds directive	Habitats directive
Definitions contd	- 'sub-basin' - 'river basin district' - 'competent authority' - 'surface water status' - 'good surface water status' - 'groundwater status' - 'good groundwater status' - 'ecological status' - 'good ecological status' - 'good ecological potential' - 'good surface water chemical status' - 'good groundwater chemical status' - 'quantitative status' - 'available groundwater resource' - 'good quantitative status' - 'hazardous substances' - 'priority substances' - 'pollutant' - 'direct discharge to groundwater' - 'pollution' - 'environmental objectives' - 'environmental quality standard' - 'combined approach' - 'water intended for human consumption' - 'water services' - 'water use' - 'emission limit values' - 'emission controls'					- 'priority species' - 'conservation status of a species' - 'site' - 'site of Community importance' - 'special area of conservation' - 'specimen' - 'the committee'
Scope	Art. 3(1) & Art. 4(1)	Art. 4	Art. 3	Arts. 2(2), 2(3), 2(4) & 2(5)	Art. 4	Art. 4

Issue	Water Framework directive	EIA directive	SEA directive	Public Participation Directive	Birds directive	Habitats directive
Measures to be adopted	Art. 4(1), Art. 11, Annex VI & Annex VIII	Art. 2(1), Art. 5(1) & 5(2), Art. 6 & Annex IV	Art. 7(2) & Annex I		Art. 2, Art. 3(1), Art. 4(1) & 4(2) & Art. 5	Art. 6(1), Art. 8(4), Art. 12(1), Art. 13(1), Art. 14 (1) & 14(2)
Exemptions	Art. 4(6) – mentions 'temporary deterioration in the status of bodies of water' not being a breach of the requirements of the directive if 'this is the result of circumstances of natural cause or force majeure...'	Arts. 1(4), 1(5) & 2(3) Arts. 1(4) & 2(3)	Arts. 3(8) & 3(9)	Arts. 2(4) & 2(5)	Art. 1(3),	No exemptions specified
The assessment of the types of effects to be considered	Art. 1(e) refers to 'mitigating the effects of floods and droughts' Art. 4(3)(a) when a body of surface water is designated as artificial or heavily modified and where changes to the hydro-morphological characteristics would have 'significant adverse effects on...' Art. 4(6)(d)&(e) 'effects of the circumstances' Art. 9(1) when recovering the costs of water services regard should be given to 'the social, environmental and economic effects'	Art. 3 the EIA 'shall identify, describe and assess...the direct and indirect effects of a project...' Annex IV – types of effects	Art. 5(1) in the environmental report 'the likely significant effects on the environment...should be identified, described and evaluated.' Annex I – types of effects	In the context of amendments to directive 85/337/EEC: Art. 3(5)(a), 3(6)(a)	Only mention of 'effects' in the context of the 'effects of marketing on such status' Art. 6(4) [i.e. biological status] Art. 1(1)	Art. 6 (3) refers to an 'appropriate assessment' of the likely significant effects of plans or projects not directly connected with the site, in view of the site's conservation objectives. The integrity of the site should not be adversely affected.
Elements of environment to be considered	4(3)(a) refers to analysis of characteristics for each river basin district	Art. 3	Annex I (f)		Art. 1(2)	
Alternatives/ Options	Art. 11 & Annex III	Art. 5(3) & Annex IV	Art. 5(1), Art. 9(1)(b) & Annex I			Art. 6(4) & Art. 16(3)

Issue	Water Framework directive	EIA directive	SEA directive	Public Participation Directive	Birds directive	Habitats directive
Environmental Information / report	Art. 13 requires the production of a 'river basin management plan' for each river basin district Annex VII contains a list of information to be included in the RBMP	Art. 5 – refers to the information, which must be provided, the phrase 'environmental report' is not used. Annex IV contains a list of information. Art. 5(3) the minimum information needed	Art. 5 contains provisions to the environmental report. Annex I contains a list of information		Art. 12 – only mentions reporting in the context of member states submitting 'a report on the implementation of national provisions…' to the Commission	Art. 4(1) requires member states to produce a 'list of sites' based on criteria set out in Annex III (Stage 1) Art. 16(2) & 16(3) – report on derogations Art. 17(1) requires member states to 'draw up a report on the implementation of measures…'
Public/ Authority Input	Art. 3(2) Art. 12 makes provision for 'public information and consultation' - encourages 'active involvment of all interested parties'	Art. 6 splits consulting authorities and public input into separate provisions Art. 6 amended by 'public participation Directive'	Art. 6 deals with consultation of authorities and the public in the same provisions	Arts. 2(2) & 2(3)	No mention of consultation	Art. 5 refers to a 'bilateral consultation procedure' Art. 17(1) Art. 22(a) makes specific reference to 'proper consultation of the public concerned' in the context of re-introducing species
Transboundary consultation	Arts. 3(3), 3(4) – refers to 'international river basin districts' where a river basin covers the territory of more than one member state	Art. 7 *Art. 7 amended by 'public participation Directive'*	Art. 7	Art. 3(5)(a) – In the context of amendments to Directive 85/337/EEC		
Decision-making	Art. 3 – refers to the identification of appropriate competent authorities	Art. 8	Art. 8			
Information on decision		Art. 9 *Art. 9 amended by 'public participation Directive'*	Art. 9	Art. 3(6) – In the context of amendments to Directive 85/337/EEC		

Issue	Water Framework directive	EIA directive	SEA directive	Public Participation Directive	Birds directive	Habitats directive
Commercial confidentiality		Art. 10				
Access to review procedure		New Art. 10(a) introduced by 'public participation Directive'				
Monitoring	Art. 8 – requirement to establish a 'programme for the monitoring of water status' Annex V (1.3)		Art. 10			Art. 11 – refers to surveillance of…natural habitats and species Art. 12(4) – monitoring incidental capture and killing of an animal species
Environmental quality standards	Preamble (40) & (42), Art. 7(2), Art. 11(5), Art. 16		Art. 3(5) & Annex II			
Pollution prevention and control	Preamble (40), Art. 1, Art. 4(1), Art. 11(3), Art. 16 & Art. 17				Art. 4(4)	
Relationship with other Community legislation	Art. 4(8) & 4(9) Art. 11 (3a)	Art. 2(2a)	Art. 11	Art. 1(b)		
Information, reporting and review	Art. 15 – requirements of member states to report to the Commission Art. 18 – Commission reporting requirements	Art. 11	Art. 12		Art. 12(1)	
Implementation	Art. 24	Art. 12	Art. 13	Art. 6	Art. 18	Art. 23
Entry into force	Art. 25	Art. 13	Art. 14	Art. 7		
Addressees	Art. 26	Art. 14	Art. 15	Art. 8	Art. 19	Art. 24

Issue	Water Framework directive	EIA directive	SEA directive	Public Participation Directive	Birds directive	Habitats directive
Objects requiring mandatory assessment	Annex V – provisions to be fulfilled for the operational programme of measures in relation to surface waters Art.(6) & Annex IV – requires mandatory register of protected areas; including those covered by the 'Birds Directive', EIA Directive', and 'Habitats Directive'	Annex I Amended by 'public participation Directive'	Art. 3(2)		Art. 4(1) – species subject to special conservation measures	Art. 4
Objects requiring screening		Annex II Amended by 'public participation Directive'	Art. 3(3) & 3(4)			Annex I & II
Screening criteria		Annex III	Annex II			Annex III
Information / ER contents	Annex VII	Annex IV	Annex I			Art. 16(3) – reports on derogations
Key transposing legislation in Ireland	European Communities (Water Policy) Regulations 2003 (S.I. No 722/2003)	European Communities (Environmental Impact Assessment) Regulations 1989 (S.I. No. 349/1989); European Communities (Environmental Impact Assessment) (Motorways) Regulations 1988 (S.I. No. 221/1988); Planning and Development Regulations 2001 (S.I. No. 600/2001); Planning and Development Regulations 2005 (S.I. No. 346/2005)	European Communities (Environmental Assessment of Certain and Programmes) Regulations 2004 (S.I. No. 435/2004); Planning and Development (Strategic Environmental assessment) regulations 2004 (S.I. No. 436/2004).	Planning and Development Regulations 2005 (S.I. No 346/2005) Planning and Development (Strategic Infrastructure) Act 2006 (s.13).	European Communities (Conservation of Wild Birds) Regulations (S.I. No. 291/1985, plus individual regulations implementing SPA designations.	EU (Naural Habitats) Regulations 1997 (S.I. No. 94/1997)

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Appendix 15

SHEATE, W.R., (2009), The Evolving Nature of Environmental Assessment and Management: Linking Tools to Help Deliver Sustainability (Chapter 1) in *Tools, Techniques and Approaches for Sustainability: Collected Writings in Environmental Assessment Policy and Management*, Singapore, World Scientific, 410pp. ISBN: 9789814289689.

THE EVOLVING NATURE OF ENVIRONMENTAL ASSESSMENT AND MANAGEMENT: LINKING TOOLS TO HELP DELIVER SUSTAINABILITY

WILLIAM R SHEATE[1]

Introduction

More than ten years of published articles in the *Journal of Environmental Assessment Policy and Management* presents an opportunity to reflect back on the nature and diversity of those articles, where a number of the key debates in sustainability have now got to and how the tools, techniques and approaches for environmental assessment and management have helped to contribute to those debates. In particular, given JEAPM was set up to provide a forum for debates about linking of assessment and management tools, how far have we come over some ten or more years in improving the linkage between these tools, techniques and approaches that are now seen as central to helping to deliver sustainability?

One can characterise the debate about what are the most appropriate tools for delivering particular sustainability issues as "The Tool-Users Dilemma" – whether to use a particular tool as originally designed; whether to adapt it; whether to connect it with other tools, techniques or approaches; or whether to develop a new tool (van der Vorst *et al*, 1999). Often the latter is seen as more attractive (one can give it a new name and try to claim some credit for it!), but all too often new tools are just re-workings of existing tools and the coining of a fancy new name. And new names for old tools just create confusion and a certain raising of the eyebrows. Before we add to the multiplicity of acronyms it is worth looking at whether better use can be made of the tools that already exist, and especially whether there are synergies that can deliver real benefits by making better linkages between them. That has been the premise underpinning JEAPM, and it is also the premise for this book and this chapter.

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There is also some history to debates around the linking of assessment and management tools, facilitated through a series of workshops at the International Association for Impact Assessment (IAIA) annual conferences. Four main workshops have been held: in 1999 at Glasgow in the UK; in 2002 at The Hague in the Netherlands; in 2003 at Marrakesh, Morocco; and in 2005 at a special conference on SEA at Prague in the Czech Republic. Reports and individual papers from those workshops - for example Volume 1 (4) special issue of JEAPM in December 1999; conference report (Sheate, 2002) in Volume 4 (4) in December 2002 - have been published in JEAPM as a means of encouraging academics and practitioners to further explore and put in practice some of the ideas and suggestions that have emerged from those meetings.

Debates in this area, however, are slow to mature. Attend international conferences in the field and you will understand: you are unlikely to miss anything critical if you miss the occasional year (!). And looking back at conference reports and papers from the 'Linking Tools' workshops at IAIA over the years, there is considerable similarity in the conclusions and recommendations that are as current now as then. So it should not be surprising that papers published in the early volumes of JEAPM are also often as relevant now as they were more than ten years ago. However, there are some encouraging signs; one can discern an evolution in thinking over that period as individual tools themselves have evolved and matured.

The book itself is structured around four themes:-
1. The (evolving) nature of the tools;
2. The nature of decision-making and institutional context;
3. The nature of engagement with stakeholders and the public; and
4. The nature of 'sustainability'.

These four themes, which have emerged from the analysis of the various IAIA workshops over the years and from the wider literature, provide us with insights into how tools, techniques and approaches (TTAs for short) can be better linked and utilised together to help support and deliver sustainability. Selecting the papers was not an easy task (from well over 200 potential papers) and that selection was inevitably a highly iterative process with the development of this chapter. The papers that made the cut, however, have something to say in their own right, in juxtaposition with others and in contributing to one or more of the four themes and the overall understanding of how better links can be made between tools. Together, it is intended they form a helpful reference resource of key writings in this field. This chapter therefore follows the same basic structure of the rest of the book, exploring the themes and weaving a thread through the selected papers.

What are these tools?

Figure 1 illustrates an array of the tools available – by no means a comprehensive list - all of which have a common purpose of contributing to sustainability, or can be used for that purpose.

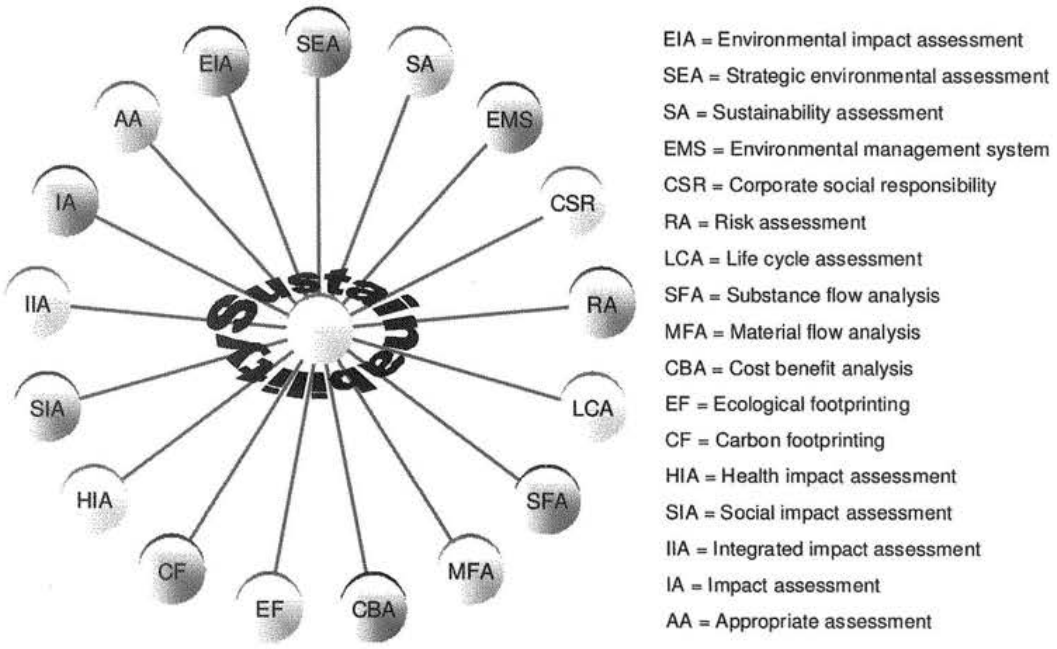

Figure 1: Tools with a common purpose: sustainability

Many papers selected for this book, of course, focus only on single areas, e.g. EIA, SEA, EMS, CSR, LCA, but the simple juxtaposition in one place provides opportunity for serendipity – discovery of different ways of looking at the same problem, intellectual inspiration and the opening of new means of exploration and connectivity. If that sounds fanciful, try it in practice – gather three or four different 'tool' users in a room together and you will find remarkable similarities and fascinating differences in approach, terminology and method. Unfortunately we all too rarely have, or make, the time to undertake such simple pleasures (as a fan of serendipity one mourns the loss of opportunity for space in which it can happen, given the changing priorities in academia). Some papers, though, address the linking of tools head on from a theoretical or practical perspective, but we still have a long way to go before we get to the routine application of linked tools in day to day practice.

The barriers to linking tools are often deeply embedded in the culture and traditions in which the tools themselves have developed: in their disciplinary backgrounds (natural science, engineering, social science); in the practical versus theoretical debates; in the technocratic versus participative debates; and so on. Academically, experts in particular tools are all too rarely physically co-located in universities with experts in other tools, e.g. EIA may be in environmental sciences or planning departments, LCA in engineering departments, EMS/CSR in business schools; critical social scientists often in completely different institutions. Each discipline and tool also has its own extensive literature and it is unreasonable to expect individuals to be fully abreast of the literatures of diverse tools and disciplines. Even where experts are co-located in interdisciplinary departments or centres the pressure of publication and other research performance metrics makes such interdisciplinary work far less advantageous for individual career progression. Too

often this same disjunction is also found in professional practice, policy making and consultancy.

With regard to the tool-user's dilemma, we are now seeing a new generation of tool users brought up on a much wider range of 'sustainability' tools than those of us that cut our teeth in the relatively pioneering days of the 1980s (often pre-EIA legislation – in much of Europe at least – and before routine use of EMS and even the concept of CSR). Those of us who have grown up with, and have been active in, the development of the tools that are now commonplace, have developed some expertise primarily in one area, e.g. environmental assessment, environmental management systems, life cycle assessment etc. – our very 'expert' status has probably militated against collaboration with other 'experts' in other areas/disciplines and even if we have wanted to, sometimes or often that has been thwarted (for example, by institutional inertia). The new generation may be less hampered by history – many users today of sustainability appraisal/assessment, for example, will have no knowledge of early forms of environmental appraisal and the various weaknesses that have coloured the views of some about weak approaches to sustainability assessment. They will, however, consequently be less informed by history, and so run the risk of making the same mistakes again.

The aim then of this chapter is to provide a framework within which the articles selected can contribute to this exploration of better linking of TTAs; to create a mindset within which the individual chapters should be read. It seeks to highlight the importance of maximizing the benefits of using existing tools and approaches effectively and to promote an agenda for action that will help facilitate making better linkages in future. The basic premise of this chapter, therefore, is that there is considerable scope for better use, adaptation and linking of existing environmental assessment and management tools, and that the best use possible of these tools should be sought rather than assume that entirely new tools are needed to address new contexts and problems. Some new tools may be needed, but such a need will be better identified if the existing ones have been used to their full potential first.

The four themes flow from the tools themselves, through the ways in which they are used, to the relationships with conceptions of sustainability. This chapter, therefore, seeks to establish the importance of the four key factors that form the themes for the book's sections:-

- The nature of tools;
- The nature of decision-making and institutional context;
- The nature of engagement; and
- The nature of sustainability.

A: The Nature of Tools

The first set of selected papers focus on aspects of a range of individual tools and their characteristics, which are also characteristics that influence the way in which they can interact. In no way - given the constraints of space - can the coverage of tools be comprehensive, so only a selection is presented here, while other tools are picked up in

subsequent sections. In discussing the nature of tools, inevitably we need to consider their 'effectiveness' as individual tools as that may provide some insight into how effectiveness might be improved (or hampered) by linking with other tools, and what conditions might be needed to maximise effectiveness.

Effectiveness

What do we mean by effective application of tools and can we even measure it? If linking tools is to bring benefits then in some way it is likely that it will need to improve the 'effectiveness' of one or more of the tools being brought into closer liaison. Evaluating effectiveness of tools is notoriously difficult, since it is unlikely that a control is available against which to compare the implementation of the tool, i.e. it is not possible to judge what would have happened in the absence of the tool. It is therefore very difficult, if not impossible, to separate out the effect of using the tool from the effect of many of the other variables affecting decision-making. The tool will have been just one factor exerting some degree of influence. There have, however, been plenty of attempts at evaluating or promoting effectiveness in, for example, SEA and environmental integration, see for example Sadler and Verheem, 1996; Fergusson *et al*, 2001; Sheate *et al*, 2001, 2003; IAIA, 2002; Fischer, 2005; Fischer and Gazzola, 2006; Emmelin, 2006; Retief, 2007; CEC, 2009). IAIA has published SEA performance criteria (IAIA, 2002) which aim:-

> *"to provide general guidance on how to build effective new SEA processes and evaluate the effectiveness of existing SEA processes."*

These criteria include the need for SEA to be integrated, sustainability-led, focused, accountable, participative and iterative and implicit in this is that if such elements are in place this is likely to lead to effective SEA processes. Fischer (2005) defines SEA effectiveness succinctly as the ability of SEA to influence the decision-making process and also the mindset of the actors involved.

Effectiveness studies are also reported in EMS, though not always with consistent results. Melnyck *et al* (2003), and Arimura (2008) suggest that an EMS (such as to ISO 14001 or EMAS standards[2]) can help improve the environmental performance of companies, while Zielgler and Rennings (2004) and Dahlström *et al* (2003) conclude that environmental management system standards (EMSS) neither change behaviour nor improve compliance, both of which might be expected if EMS is to deliver continuous environmental improvement. Evangelinos and Halkos (2002) on the other hand, suggest that companies (in Greece) implementing EMSS have a different mindset with regard to environmental issues, seeing them as opportunities rather than threats. This implies that the attitude to EMSS may come first, rather than the EMSS bringing about a change in behaviour or environmental improvement, and that where the latter occurs it may be a manifestation of the different mindset as much as, if not more than, the result of the EMSS itself. This probably strikes a chord across all tools; effectiveness is likely to be greatest where tools are used by those most motivated to use them.

[2] ISO 14001 Environmental Management Systems Standard and EU Eco-Management and Audit Scheme (EMAS) under Council Regulation (EEC) No. 1836/93.

A simple understanding of effectiveness more generally, therefore, may be that for a tool to be effective it needs to be able at least to meet its own objectives. In the case of SEA this will be to ensure that environmental considerations inform and influence the decision-making process about whether a plan or programme will be adopted or approved, i.e. that the environment is integrated into decision-making. This influence may occur at various stages throughout the planning process: early on in influencing the options considered, and at later stages to inform mitigation and monitoring. Arguably it is at the earliest stages where SEA can be most effective in influencing the overall direction and objectives of the plan, programme or strategy under consideration. As Noble (2000, 2002) suggests, a truly strategic consideration of alternatives requires the assessment of *alternative options*, i.e. alternatives for meeting the objectives set, such as alternative modes of transport. This is in contrast to a consideration of *option alternatives*, e.g. alternative locations or routes that might occur in an EIA of a road scheme where the option of a road has already been decided. In the EU, the SEA Directive 2001/42/EC requires the evaluation of reasonable alternatives and is creating an important lever in ensuring that alternatives are properly considered and a potential focus for legal challenge if they are not[3].

In the case of EMS it will need to bring about continuous environmental improvement in the performance of the company or site concerned. A limitation of EMS is that it doesn't require a specific level of environmental performance; it is up to the company to decide itself, since if international standards specified levels of environmental performance, they would have to be specific to each business activity and that would require a specific EMS standard for each business, which is not the intention of the ISO standard (ISO, 2009). As a voluntary management system it only establishes a process that enables a company to show that it is meeting the objectives it has set itself. From this point of view it shouldn't be that difficult for an EMS to be effective in terms of meeting its own objectives. Whether it is effective in delivering real and significant environmental improvement or wider benefits is another question entirely, which may account for the differences observed in some of the literature, and dependent very much on how and by whom the process is driven internally rather than simply external forces.

The legal status of tools may also influence the effectiveness from the point of view of environmental performance. EIA and SEA, as legislated tools, have more established objectives and are designed to influence formal decision-making points, with requirements often to show publicly how the assessment process has influenced the final decision. Failure to comply can result in rejection of a plan or programme. The diversity of ways in which EIA and SEA have been implemented in law and in practice worldwide enables an evaluation of common principles. The creation of common international standards, e.g. ISO 14000 or ISO 14040 series for EMS and LCA respectively provides an alternative and consistent approach to formalising the principles and framework for environmental management systems and life cycle assessment that are voluntary in nature rather than legislated. Setting individual standards in this way may, of course, potentially militate against their more imaginative use in conjunction with each other and other tools,

[3] Recent UK case law on SEA, e.g. *Seaport* case in Northern Ireland: No. [2007] NIQB 62; *East of England Plan* case (Hertfordshire County and St. Albans District Councils v Secretary of State for Communities and Local Government, May 2009); and critique of Eco-towns SA (Sheate, 2008a).

which might necessitate pragmatic adjustments to the processes in order to gain synergistic benefits.

In the first of the selected papers, David Lawrence (Chapter 2) examines EIA as a process that provides the framework for structuring EIA activities, events, documents and methods. He explores design and management choices available to EIA process participants in relation to (1) general EIA process design and management; (2) process inputs, outputs and linkages; and (3) process adaptations. He emphasises that the available choices are more extensive than are generally recognised in EIA process characterisations, that EIA has evolved and continues to evolve[4]. EIA process participants can, therefore, select the mix of choices that best suit proposal characteristics, environmental conditions, contextual factors and their interests and priorities. An awareness of the available choices is a good first step. Lawrence argues that EIA quality and effectiveness analyses could, with appropriate adaptations and refinements, help distinguish among blends of choices that are more and less effective. Critical to this is a recognition that one size does not fit all and that EIA as a process-based tool needs – and offers – flexibility to be effective in its own right. That very flexibility should be a benefit in linking with other tools.

What aspects can 'link'?

An obvious connection exists between EIA and SEA, in various forms and variously legislated for together or separately. While often seen as existing on a continuum of environmental assessment, increasingly SEA is seen as drawing on different methodologies and techniques the more strategic the decision level. But linkages occur through *'tiering'* (where higher decision levels set the framework for lower decisions) and *'overlaps'* especially around the local plan/programme/project levels (Sheate *et al*, 2005; Sheate and Bennett, 2007; CEC, 2009). In such circumstances, in the EU for example, some proposed activities may meet the criteria for both the EIA and SEA Directives (85/337/EEC as amended and 2001/42/EC respectively) at the same time and therefore need to comply with both Directives. This may necessitate parallel or joint procedures and possibly some joint documentation or processes.

Similarly in the EU, under the Habitats Directive 92/43/EEC (Article 6), appropriate assessment (AA) may be needed where a plan or project might impact a site designated under the Habitats Directive (or Birds Directive) as a Natura 2000 protected site: i.e. an assessment of the impact of the proposal on the integrity of the conservation status of the site. This may be in parallel or as part of an EIA process, or alongside an SEA process, but given the site specific nature of the issues under assessment the more strategic the plan the more difficult it is to assess the level of risk to the site's conservation status posed by the proposed plan (Sheate and Bennett, 2007).

In both EIA/SEA links and EIA/SEA/AA links these are links based on *'similarity of objective'*, where effective linkage can avoid undue duplication and help deliver the similar objectives of the relevant (assessment) legislation. Beyond this first category of

[4] For an interesting debate on this matter see *Impact Assessment and Project Appraisal*, Round table: What is the alternative? Impact assessment tools and sustainable planning, Vol 21 (4), December 2003.

linkage is a second category of linkages based on *'dissimilarity of objective'*, but *similarity of purpose*, which is to help in delivering sustainability (van der Vorst *et al*, 1999).

The starting point, then, for linking tools with dissimilarity of objective has to be "What are the benefits – particularly for sustainability – of making linkages between such tools?" Linkages between EIA/SEA and other 'tools' such as life cycle assessment (LCA), substance flow analysis (SFA)[5] and environmental management systems (EMS) are not very well developed, though this is improving with some advances in the literature over recent years (e.g. Baumann and Cowell, 1999; Burström, 1999; Ridgway, 1999, 2005; van der Vorst *et al*, 1999; Emilsson *et al*, 2004; Vanclay, 2004; Cherp *et al*, 2006; Emmelin et al, 2006; Perdicoulis and Durning, 2008). EMS is most often associated with project and site level decisions so experience of applying EMS at strategic levels is limited. Sweden, however, is one example where there is experience of EMS at municipality level (Burstrom 1999; Cherp *et al*, 2006), but it isn't necessarily always applied in a very strategic way (Emilsson *et al*, 2004).

Bronwyn Ridgway (in Chapter 3) examines the potential interrelationships between environmental impact assessment (EIA) and environmental management system (EMS) processes. She begins by looking at the project cycle and the role of EIA in the planning and design phase and then focuses on the potential for links between the initial environmental review phase of EMS and the EIA report recommendations, noting that the format of EIA reports does not readily assist the development of an EMS. Historically, of course, there is no reason why it should since EIA was developed before EMS came into being. Ridgway suggests, however, that the recommendations from an EIA could be structured and summarised to make them more accessible and that certifying the EMS could provide a means of ensuring their implementation. This represents a very practical benefit of linking and requires EIA to be 'undertaken with EMS in mind'. Too often it isn't, because historically they weren't developed together, but perhaps also because EIA experts are rarely also EMS experts, or vice versa, and as Ridgway points out, because EIA as a process is planning and design focused and not management focused. Some authors (e.g. Morrison-Saunders and Arts, 2004) see these links through 'EIA follow-up', though by implication that sees the management aspects as subservient to the EIA process rather than both having equal importance.

Jeffrey Barnes and David Lemon (Chapter 4) provide an excellent case study of the Confederation Bridge Project in eastern Canada to show how EIA and EMS can be linked in practice through a life-of-project environmental management strategy for a privately-funded public project. The cornerstone of the strategy was an Environmental Management Plan (EMP), an umbrella document which describes how the developer managed all environmental aspects of the project throughout the construction phase and the subsequent 35-year period of private ownership. The EMP comprised several

[5] The difference between material flow analysis (MFA) and substance flow analysis (SFA) is described as: "A substance is defined as a single type of matter consisting of uniform units such as atoms (chemical element) or molecules (chemical compound). A good is an economic entity and comprises one (water as H_2O) or many (water as drinking water with H_2O, calcium etc.) substances. A material stands for both goods and substances, and is used when the author either does not want to specify the level of analysis, or includes both substances and goods in the analysis." (Brunner and Rechberger, 2003).

dynamic plans and programmes and in this case it was developed prior to the completion of the environmental assessment, and in so doing provides an example of the benefit of such linked thinking, especially for a finance-build-own-operate-transfer infrastructure project. They conclude that the use of environmental management systems to encapsulate environmental management strategies early in project planning in this way can be particularly beneficial. EMPs in various forms are generally becoming much more widespread (Ridgway, 2005), illustrating nicely the practical benefit of linking these tools together.

From Barnes and Lemon's practical example, Chapter 5, by Anastássios Perdicoúlis and Bridget Durning, reviews past conceptual frameworks in this area and specific issues regarding EIA-EMS integration. They propose a conceptualisation intended to be adaptable to the varied practice of EIA worldwide and to ISO 14001 compliant EMS. This is based on an alternating sequence of EMS and EIA – the EMS providing the planning context for the project development and EIA and then EMS picking up from consent and during operation, with adaptations in key documents of both processes.

So there are clearly potential and practical benefits of linking between EIA and EMS. Franch Vanclay (Chapter 6) takes us beyond two tools to look at many, and highlights the difficulty related to diverse disciplines being able to recognise or even be aware of similar tools already in existence; a fundamental barrier to tools being able to work together. Triple bottom line (TBL) thinking has become the mantra in CSR and EMSS but, as a leading exponent of social impact assessment (SIA),Vanclay argues many of the issues faced by consideration of the 'social' in TBL are very similar to issues faced by SIA in its connections with biophysical EIA and the financial considerations associated with projects including economic and fiscal impact assessment, and cost-benefit analysis. He complains that the advocates of TBL and the institutions that have adopted TBL appear ignorant of SIA and other forms of impact assessment. In his view TBL is a fad that presents little that is new, and that TBL would learn a great deal by considering the experience of SIA.

Here he identifies five trends – i) the move to SEA, ii) every other form of impact assessment (i.e. the plethora of very specific forms of impact assessment that some might say are crying out for identity), iii) integration, iv) a broadening of the definitions so that impact assessment is no longer just about prediction of likely effects, but underpinned by more of a philosophy, and v) the trend in codifying assessment considerations into management standards. Vanclay illustrates a common frustration with the creation of 'new' tools that are usually just variations on the theme of an existing tool, though perhaps doesn't always recognise the difficulties of other disciplines understanding the literature of impact assessment. He raises an important issue, however, in terms of the trend to 'integration' and 'integrated tools, which is not the same as improved linkage of tools. Integration can mean very different things to different people and may not inherently provide greatest benefit to the environment (Scrase and Sheate, 2002). It may also be overly rigid when more flexible linking of tools may be more appropriate.

Wouter de Ridder, John Turnpenny, Måns Nilsson and Anneke von Raggamby (in Chapter 7) bring a political science perspective to assessment tools and policy appraisal (see also Owens *et al*, 2004; Turnpenny *et al*, 2009). They explore the concepts of

integrated assessment, recognising that it is rapidly developing in the scientific as well as policy community and that different methods, techniques and procedures (or tools) are used in these assessments. In their view the choice for using certain tools in an integrated assessment is not well founded. In Chapter 7 they present a framework they suggest can underpin scientifically the role of, and therefore the choice of, tools within an integrated assessment. As an aside, there is an interesting question as to what extent the choice of tools within such an integrated assessment needs to be justified in this way, since in practice there are likely to be a multitude of pragmatic reasons why some tools can and can't be used – otherwise known colloquially in English as 'horses for courses'. And in some cases you may have no choice but to include certain tools within an integrated assessment in order to comply with legislation (e.g. under the English planning system sustainability appraisal is required to be applied to draft spatial plans produced by local authorities addressing environmental, social and economic factors, but often it must also incorporate SEA in order to be compliant with the EU SEA Directive).

The framework identifies four phases in an integrated assessment, derived from the complementarities between various forms of integrated assessments. Tasks have to be undertaken within each of the four phases. Seven types of tools with similar characteristics are then matched to those tasks. The framework is a theoretical construct, developed whilst keeping in mind perceptions and suggestions from eventual users. In particular, it was developed with a focus on the European Union's Impact Assessment tool (an 'integrated' tool for assessing EU policy). They see this as a first step in the development of an overarching framework for finding appropriate tools for different tasks in an assessment, and justifying the use of those tools. This of course starts from the premise that integrated tools are an appropriate way of approaching particular types of assessment requirements; some of the risks of integrated assessment are considered in later chapters. The framework essentially attempts to match phases of assessment – in reality stages of the policy cycle, i.e. problem identification, options appraisal, analysis and follow-up – with the range of types of tools available. Useful though this is, for some practitioners it may appear rather mechanistic in approach, without giving sufficient recognition to the stronger philosophical and advocacy roles some tools have now developed as they have become used as wider approaches, such as SEA and life cycle thinking/clean technology, for example.

De Ridder *et al* focus on Impact Assessment as an integrated tool; Sally Caird and Robin Roy (Chapter 8), on the other hand, provide a case study of ecological footprinting – another relatively new tool, based on a non-monetary metric: hectares of land. A distinction is necessary here, perhaps, between integrated tools such as the EU Impact Assessment tool and tools which try to be 'comprehensive' environmental assessment tools. In other words some, such as ecological footprinting, might be considered to be multi-focal – addressing a wide range of environmental factors, which others such as carbon footprinting might be classed as uni-focal – focused solely on one key environmental component, such as carbon. There are some interesting parallels here with Vanclay's complaint about the multitude of special interest forms of assessment. While ecological footprinting came first, as a useful and easily communicated metric of the impact we as humans have on the environment as a result of our everyday lives, climate change as the dominant environmental issue of recent years has driven the development of carbon footprinting – a uni-focal tool, sometimes to the exclusion of wider

environmental considerations. This is highly relevant when it comes to understandings of sustainability and there is recognition, in some circles at least, that a sole focus on carbon may not on its own deliver real sustainability (GFN, 2009; Best Foot Forward, 2009[6]). Low carbon living can still be resource intensive, for example, although carbon can be a proxy in some cases for other resource use. Ultimately, carbon footprinting gives you a single absolute value (grammes or tonnes of CO_2) that can be 'costed' and therefore is more akin in nature to CBA (great if you want to create a market through emissions trading). It has an important use of course, as a means of identifying, for example, how a company can reduce its carbon footprint. But the use of carbon footprinting in labelling (e.g. of potato crisps[7]) seems to be more questionable. Ecological footprinting also gives a value, but a value (number of hectares of land needed to support a person, company, community, city or country), which incorporates carbon as a key element, but also addresses other resource uses and impacts, so allowing comparisons to be made against the Earth's capacity. This issue is considered further in the later discussion on the nature of sustainability.

Caird and Roy consider how demographic factors influence the environmental impacts of households, reporting from a major two year study using ecological footprinting to measure the environmental impacts of over 1000 UK households. They found that energy and transport were the biggest contributors to the 'footprint' of households. Rural, and adult households and households with few members, had significantly larger per capita ecological footprints than urban/suburban households, households with children and households with several members. Although 11% of these UK households could be regarded as environmentally sustainable, the majority would require a reduction of 60% in their ecological footprint to achieve a globally sustainable footprint per person. They discuss the potential policy implications of demographic influences on household ecological footprints, including personal carbon allowances and house planning and design.

B: The Nature of Decision-Making and Institutional Context

The starting point for the role of tools in decision-making - and therefore how and why they might be linked – has to be an understanding of their purpose. Chapter 9 – by Rita van der Vorst, Anne Grafé-Buckens and William Sheate is the first paper of the first issue of JEAPM – in 1999, authored by three colleagues from Imperial College London – which brought together LCA, EMS and EIA perspectives for some collective 'thinking out loud' around the developing concepts of clean technology. We saw the context of sustainable development posing new challenges for traditional environmental decision-making tools, such as environmental impact assessment, environmental management systems and life cycle assessment. Today these tools are expected to provide multidisciplinary information to aid sustainability decisions, not just to inform decisions

[6] Best Foot Forward, on their website (http://www.bestfootforward.com/ecological_footprinting), state *"The ecological footprint serves as a resonant sustainability indicator by clearly linking consumption to the Earth's carrying capacity. The ecological footprint is a comprehensive indicator of environmental impact, which goes beyond carbon to also consider renewable resources..."*

[7] See http://www.walkerscarbonfootprint.co.uk

about environmental effects. So Chapter 9 brings together the different perspectives of authors from EIA, EMS and clean technology/LCA to examine critically the separate tools in the context of sustainable development, and their inter-relationships, identifying (as already noted above) the "tool-user's dilemma". The chapter examines the similarities of these key tools and recognises both a paradigm shift and a congruence in the way in which they have developed: from being merely tools, through being techniques to approaches – reflecting what Vanclay identifies in Chapter 6 as the trend in changing definitions. The outcome is a suggested 'integrated' framework within which the tools can continue to operate effectively – separately and linked - and one that helps resolve the tool-user's dilemma. Here 'integrated' is used in the sense of providing a coherent framework for separate tools, not an integrated tool. Clean Technology is seen as providing a useful philosophical understanding for the operation of this outline framework, which poses fundamental questions about need and alternative options, whether considering planned development, operation and performance of companies or development of new products and services (Maxwell *et al*, 2006).

SEA provides a useful example for understanding the relationships between strategic tools and decision-making. At strategic decision-making levels SEA can exist in many guises, including as part of a wider sustainability assessment addressing economic and social parameters (Dalal-Clayton and Sadler, 2005; Gibson *et al* 2005). Verheem and Tonk (2000) recognise there are several approaches to SEA that have been developed that differ in openness, scope, intensity and duration. They suggest that differences originate from the specific context in which they are used and that although design for purpose helps effectiveness, the sheer variety of approaches can be confusing and impede the take up of SEA. Kornov and Thissen (2000) also recognise the duality of SEA, identifying SEA as either having an advocative role, where its primary purpose is to raise the profile of the environment, or an integrative role where environment, social and economic considerations are combined in a more 'objective' way.

SEA, then, should take detailed information from different aspects of the environment and bring it together in an accessible form for the decision-maker (Sheate *et al*, 2003). How effectively SEA can do this will depend on a number of factors, for example, the policy context, such as whether there is multiple or single actor decision-making (Kornov and Thissen, 2000), and the nature of the SEA. One of the key benefits of SEA is that it can provide a framework within which more strategic participation of the public and stakeholders can take place. The stages of SEA provide excellent opportunities for the inclusion of participation, in order to better inform options (e.g. at scoping stage) and the assessment of options.

Experience of integrating SEA (or forms of SEA) into planning processes is now widespread (e.g. in the European Union following the implementation of the SEA Directive 2001/42/EC since 2004), but context clearly is important. A simplified form of SEA[8] may enable linkages into less well-developed planning processes better than SEA,

[8] The form of SEA developed in the Netherlands for use in overseas development aid – SEAN - is a method with practical tools and guidelines for a systematic analysis of the environmental potentials for and constraints on human development. The analysis itself, including priority setting and making strategic choices, is steered mainly by social and economic development criteria. See also http://www.seanplatform.org/

where a more structured planning process is most beneficial (Castillo et al, 2005). SEA needs to be flexible so it can be adapted to context specific circumstances (Nitz and Brown, 2001; Nilsson and Dalkmann, 2001; Partidario, 2000; Therivel and Minas, 2002), compared to EIA which is perhaps more standardised by the consent processes to which it is attached. It may not always be its technical value, but more its transparency and accountability aspects that are most important from applying SEA (Blank and Smith, 2005). This experience is not uncommon where SEA is applied, either in a formal process or in a more voluntary, informal or ad hoc way, and was recognised in a number of cases in research undertaken for the European Commission on SEA and its integration in strategic decision-making (Sheate et al, 2001, 2003). One example of this from the UK was the first formal application of SEA by a Government department - the application of SEA to the Strategic Defence Review by the Ministry of Defence (MoD), specifically by the Defence Estates agency in 2000. In this case the SEA was rather an *ex poste* affair, but it set in train a much broader development of SEA and the application of sustainable development principles throughout Defence Estates and the rest of the MoD, including capacity building through the training of new staff.

Baseline and a clear understanding of environmental capacity thresholds, limits and constraints can provide a means of encouraging participation, enabling people to think more strategically if a suitable visual tool, such as GIS is used to establish a clear baseline (Oliveira *et al*, 2005). Generic baseline can only go so far though; there is a clear need to have specific and context relevant baseline for each specific SEA situation. In the context of linking tools, it is baseline data that provides a crucial means by which SEA can connect to EMS, through monitoring, follow-up and continuous improvement in environmental performance. A clear benefit from making such links, therefore, will be in the efficiency and effectiveness of monitoring programmes and data gathering for both SEA and EMS purposes.

Some of these principles may also apply to EMS and LCA, for example, in particular the underlying drivers to their use (the purpose for which they are being used) and the extent to which, and by whom, they are genuinely championed within a company or organisation. If EMS is used primarily as a promotional tool (a stamp on the letterhead) it is unlikely to be delivering wider improvements. Various conditions are therefore needed to allow TTAs to work and so influence decision-making. Since the decision-making context clearly makes a difference to how well the 'tool' is able to operate, can that context be influenced by other tools, e.g. if a local authority has a strong environmental policy framework created by an EMS, does that influence the way in which SEA is implemented? And therefore could linking SEA to other tools make SEA more effective? And could linking SEA with other tools bring benefits or enhancements to those tools as well?

Central to understanding how tools can be used to inform decision-making are debates about rationality. Strategic tools, such as SEA, are often see in the same light as project tools, like EIA, which has been heavily influenced over the years by a rationalist perspective which suggests that providing information (on the environment) to decision-making will make for more informed decision-making. It may, but it is not inevitable and will depend also on other factors. At strategic levels decision-making is invariably even more dynamic and iterative, and even less rational that at project consent level (if it is

even there). Increasing complexity and lower predictability of environmental issues at strategic level therefore mean that such decisions are more likely characterised by bounded rationality. Måns Nilsson and Holger Dalkmann (Chapter 10) address this issue and suggest SEA must be more sensitive to the real characteristics of the decision-making context and particularly a better understanding of policy analysis and decision theory rather than drawing on predominantly impact assessment tradition. That is probably true where the decision-making context, e.g. plan making, already exists, but where it doesn't SEA can help shape a decision-making process (as, for example, in the UK for offshore oil, gas and wind licensing (DECC, 2009).

Angus Morrison-Saunders and Thomas Fischer (Chapter 11) pick up on the dangers of over dominance of economic perspectives in integrated forms of assessment such as SA and a reminder that one shouldn't forget the environmental origins and purpose behind the early development of EIA, as an advocacy instrument for the biophysical environment in project decision-making. Strategic environmental assessment (SEA) evolved with a similar mission for strategic level proposals. However, recent trends towards more integration, particularly in the context of sustainability assessment (SA) mean that social and economic aspects are now frequently considered on a par with the environment in impact assessment processes. They rightly identify that this development will ultimately favour trade-offs towards socio-economic benefits, causing adverse environmental impacts. Pope and Grace (2006), for example, describe case studies in Western Australia where SA is increasingly being applied at project level, which raises particular concerns about the potential for double counting of the economic benefits in the SA and in the normal consent process. Economics are, after all, the foundation of any justification for providing development projects. Morrison-Saunders and Fischer discuss problems connected with these types of integrated assessments, based on observations of SA processes considered environmentally unsustainable. They argue that the need for environment focused EIA and true SEA in planning processes is now greater than ever, and that until power relationships develop in a way that will allow integration in an environmentally sustainable manner, practitioners should not give up the benefits that have arisen from 35 years of EIA practice. The power relations can be seen here as a fundamental barrier (or if right a success factor) in delivering effective application and linking of tools.

Implicit in some of the discussion above is a questioning of the merits that new (and often integrated) tools are necessarily needed or will deliver greater environmental or sustainability benefits. Do we, then, need new tools or can we make existing tools work better together? Repeatedly in IAIA workshops over the years there has never been a particularly strong sense that new tools were really needed. Indeed, a widely supported view was perhaps that we focus far too much on the tools themselves rather than the institutional capacity and cultural context in which they are used. In Chapter 12 Sara Emilsson, Sara Tyskeng and Annica Carlsson argue that while there are many environmental management tools available to support integration of environmental perspectives in decision-making processes, a single tool is seldom the answer to all queries. The authors explore the potential benefits of using a combination of different environmental management tools in a local authority context. Three environmental management tools used in Swedish local authorities are examined — Substance Flow Analysis (SFA), Strategic Environmental Assessment (SEA), and Environmental

Management Systems (EMSs)—from mainly a theoretical point-of-view. The tools are positioned according to their key characteristics, and their individual contribution to environmental management in local authorities is explored. They suggest that for the local authorities, a combination of tools allows decision-makers to integrate experience from individual projects into overall environmental management, which helps decision-makers to deal with some of the challenges that different environmental management situations require.

So how do tools working together fit with decision-making processes? Key trends that emerge from the papers in section B are:

- The important role of environmental assessment and management tools in creating transparency and accountability;
- The significance of context and that tools needs to be integrated into existing planning and management processes, or else appropriate processes need to be created;
- The importance of tools making the most of existing processes, so for example. if there is an existing strategic EMS context then SEA can engage with it. The corollary of this, of course, is that it is difficult if not;
- Institutional capacity can prove to be particularly limiting to the ability of practitioners, decision-makers and stakeholders to link tools and planning and management processes. Institutional capacity building is, therefore, critical in offering accessibility to decision-making processes from the bottom up;
- The need to reinforce tool application by legislation (or standards as appropriate), to ensure effective processes happen by making them a requirement or by setting minimum standards;

Scale provides another dimension to context (João, 2002) since if different tools are operating at different geographical or temporal scales linkages will be made difficult if not impossible. Different geographical scales, e.g. of SEA and EMS, will mean that different levels of detail and types of data are involved, which adds a further difficulty for tools such SEA and LCA or EMS to overcome. Temporally, SEA and EMS for example can be sequential or alternating (as in Chapter 5), where EMS also provides a monitoring mechanism to SEA, so providing a basis for subsequent review and updating of the plan or programme to which SEA is being applied.

What emerges, then, from the discussion above and the chapters in Part B is that tools need to be flexible and responsive to context requirements, and that links to other tools and/or decision-making/planning processes will only happen where there is institutional capacity to facilitate beneficial outcome. This will necessitate the creation of mechanisms that encourage different departments within an authority, agency or company, for example, not just to talk to each other, but to engage actively together on a common cause.

C: The Nature of Engagement

A key consequence of the institutional and decision-making context discussed in Part B was the need for institutional capacity building. This factor is also critical if public and stakeholder engagement to varying degrees is to become an integral component of all

environmental and sustainability assessment and management tools and so aid transparency; so essential if tools are genuinely going to contribute to sustainability. Public and stakeholder engagement varies considerably among the range of existing environmental assessment and management tools. It is inherent to environmental assessment – to varying degrees and satisfaction (reinforced in Europe by the Aarhus Convention[9]), focused more on communication for EMSS and CSR and largely non-existent in the more technical LCAs. A crude generalisation might be that the most technical tools tend to be the least open and transparent to public scrutiny. It doesn't have to be so, however. Equally, the outputs of more qualitative tools such as CSR actually may not be much utilised by stakeholders unless there is confidence in the basis and rationale for using them.

Patricia Fitzpatrick (in Chapter 13) focuses on environmental assessment and particularly capacity building through organizational learning from participation in environmental assessment (EA). She examines information sharing, information interpretation, organizational memory and learning outcomes of organizations involved in two concurrent but geographically separate EAs in Canada: the Wuskwatim generation station and transmission lines projects (Manitoba) and the Snap Lake project (Northwest Territories). Primary data collection included semi-structured interviews with EA participants, and a review of documentation generated through each EA. Data were analyzed based on criteria derived from organizational learning literature. She found that organizations have a variety of structures that facilitate learning. Learning outcomes by state actors emphasized "single-loop learning", activities designed to improve performance within the existing EA process. Public actors, however, identified a wider range of outcomes centred on changing the EA process, termed "double-loop learning" and how to use the EA process to further organisational objectives. This latter point is particularly relevant to the potential linking of tools, i.e. that this kind of double-loop learning is needed for actors within organisations in order to identify the opportunities and potential benefits of using specific assessment and management processes for other purposes or how those processes could be linked to help deliver better sustainability outcomes.

Philip Sinclair, Sarah Cowell, Ragnar Löfstedt and Roland Clift, in Chapter 14, unusually look at participation in relation to LCA, typically a more technical and quantitative expert tool than many others, though since it is focused on process and product design it is complementary to development consent tools such as EIA. The authors here have sought to integrate LCA and risk assessment through a systems approach – what they term environmental systems assessment (ESA) - which also seeks to integrate information (qualitative and quantitative) across the three components of sustainable development (environmental, social and economic). Through a case study of municipal solid waste management – and specifically strategic Waste Disposal Plans in the UK – the authors developed a multimedia interactive CD-ROM software package known as WOMBLE (Waste Operations Management By Life cycle Effects). This was deliberately written for non-experts to enable them to use the expert tool WISARD, a quantitative life cycle assessment package, which in turn was intended to enable involvement in developing and

[9] UNECE (1998) Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, ECE/CEP/43 Aarhus, Denmark, 25 June 1999 (Aarhus Convention).

assessing options for management of Municipal Solid Waste (MSW). The authors found that this combination of tools could reduce the time needed to achieve effective communication, learning and active engagement in such a strategic decision-making process – a clear benefit from linking tools.

From stakeholder engagement in planning and design of strategic waste disposal options, Danastas and Gadenne (Chapter 15) look at stakeholder – and in particular non-governmental organisations (NGOs) – engagement with companies. They consider the extent to which NGOs use corporate social disclosure information, illuminating how such external stakeholders engage with the outputs from corporate social responsibility processes. In their study, NGOs overwhelmingly believe corporate social disclosure media has low credibility and are sceptical of the information being reported. A majority of NGOs believe that voluntarily-provided information regarding the environment and resource conservation is, however, relevant to their needs. But NGOs also require improvements to current social and environmental information which provides a balance of the good and bad; beneficial and detrimental; as well as honest reporting and true costs of all information that is available from companies. The medium most used by NGOs is environmental reports, followed by website reports and annual reports. The annual report is no longer the preferred medium of many companies when disclosing social and environmental information or, as the authors show, the preferred medium of NGOs accessing information.

Overall, Danastas and Gadenne reveal a relative consistency in NGO viewpoints regarding corporate social disclosure across time, and show that NGOs view corporate social disclosure as low in credibility and insufficient even when the information provided is relevant. Interestingly, in contrast to Chapter 14, NGO engagement here is as an essentially passive recipient of information. Corporate social disclosure – almost by definition in the use of the word 'disclosure' – reflects companies releasing information because they are required or expected to. Voluntarily released information was regarded as relevant by NGOs, but still inadequate. A useful lesson for CSR from other tools might be the recognition of the need to go beyond what is required in legislation or routine custom – however essential that might be to establish a minimum requirement – to undertake good (or best) practice in a proactive way. That might require companies to engage more actively with NGOs and other stakeholders to understand what information they might actually use and engage in a real dialogue through active engagement processes rather than primarily through the use of information communication. Coming at the issue from this perspective also might create opportunities to identify other engagement processes that could become more inclusive or more long-term – e.g. through EIA of new development projects and the increasing use of EMPs, where stakeholders such as NGOs could be more included, for example, in ongoing stakeholder advisory panels.

New processes and communication routes may therefore need to be established to facilitate linkages being made between tools, particularly where they have very different traditions or approaches to engagement (lots, some or none at all, for example). Linkages are unlikely to happen without proactive encouragement. Sometimes creating mechanisms or research activities that force different interests into collaboration are needed for these things actually to take place. Increasingly we may find mutual tools or

techniques need to be used that help to link together diverse processes. Particularly at strategic levels communicative processes may become more relevant and effective than technical methodologies (Sheate *et al*, 2003; Vicente and Partidario, 2006). Using scenarios or foresight studies[10] to link tools, for example (van Latesteijen. and Scoonenboom 1996; DTi, 2002; CEC, 2006; Keough and Blana, 2006; Sheate *et al*, 2008b; Partidario *et al*, 2009; EEA, 2009) may provide just such a mechanism, exploring how different tools may respond under different future conditions. Scenarios also offer a useful communication medium, through story telling – the *'What if...?'* situation – around which discourse can occur. Given the importance of alternatives to SEA (Noble, 2000), discussion around alternative scenarios can create a suitable forum for engaging the public and other stakeholders. Importantly - for consideration about linking tools – this creative domain could be extended to other tools, such as EMS:–

'What happens after a decision has been made and an option chosen?'
'How should business respond under different pressures or regulatory regimes?'

Or LCA may be used to inform an understanding about and assessment of the various options available under each scenario, or to inform the EMS. The benefit here is that the scenario provides a 'meeting place' where the tools and actors can interact with a common purpose, rather than trying perhaps artificially to make links between elements of the tools themselves, when the prevailing institutional and cultural context is not supportive. Rather than trying to change the institutional or cultural context – which may be too big a challenge – the creation of a common space may be easier and more effective in creating opportunities for dialogue and knowledge brokerage between the tools and among practitioners and stakeholders (Sheate and Partidario, 2009). In turn, this may help build institutional capacity to recognise and develop the value of linking tools.

Public and stakeholder participation may be another common currency through which linkages can be better explored, particularly in the land use and spatial planning sphere, where public engagement often is already formalised. So while it may be second nature for a public authority (e.g. a local authority) to engage the public in spatial planning and SEA, this may not be the case for the same authority in undertaking EMS or LCA. One potential vehicle that seems to have lost considerable profile over recent years in some countries (and in the recent literature) is Local Agenda 21, and their local groups or community fora that can provide a one-stop-shop for local authorities and communities to engage and collaborate over a wide range of environmental and sustainability initiatives (Evans and Theobald, 2003). LA21s typically develop a vision statement; an action plan; and implementation mechanisms around local sustainability issues – all of which provide the potential common space for dialogue and knowledge brokerage and where linkages between tools would help deliver on all three components: vision, action plan and implementation. If such public participation mechanisms were also used as the basis for linkage research, e.g. through transdisciplinary approaches (Wiek and Binder, 2005; Scholtz *et al* 2005, 2006), engaging stakeholders actively with local authorities on say SEA, EMS and LCA, that may facilitate a much better understanding of where the linkages might occur and how.

[10] See for example European Commission and UK Government foresight webpages: http://ec.europa.eu/research/foresight/11/home_en.html and www.foresight.gov.uk

D: The Nature of Sustainability

This chapter began with reference to what is now the common cause shared by all environmental assessment and management tools – that of sustainability, even though many did not start out with that as the underlying purpose. Our understanding of sustainable development and sustainability, as individuals and as organisations, and approaches to assessment (e.g. Pope 2006), as well as in different ways of interpreting these, therefore represents a significant arena for exploration if we are to enhance opportunities for linkages between tools (Faber *et al*, 2005; Jan Kiewert and Vos, 2007).

Asked to define sustainable development you would be hard pushed to find anyone who wouldn't quote Brundtland (WCED, 1987); only they would probably only quote the first part (as some of the authors do below):-

"Sustainable Development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

- *the concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and*
- *the idea of limitations imposed by the state of technology and social organisation on the environment's ability to meet present and future needs."* (WCED) 1987:43)

The traditional approach of governments has focused on the first part of this definition and not the second, which has a strong social and environmental imperative (Sheate, 2003; Scrase and MacKerron, 2009). Consequently the tendency has been for a balancing of environmental, economic and social elements – which resulted, inevitably, in setting one or more of these three elements against the other(s) and consequently with varying degrees of trade-offs ensuing (Gibson, 2006; Sheate, 2003). This seems rather counter-productive and doesn't help to facilitate a common understanding of sustainability (Vanclay, 2004), nor a sharing of expertise or linking between e.g. environmental and social impact assessment (SIA) tools, triple bottom-line (TBL) thinking, and economic cost benefit analysis (CBA) and valuation tools. If anything, there is much continuing mutual antipathy among impact assessment specialists and economic valuation specialists.

Neither is sustainability just about climate change. That can reflect another set of trade-offs – between carbon and e.g. resource use, other pollutants, biodiversity etc – if your sole currency is carbon (or CO_2 equivalent). A carbon focus also reflects somewhat inevitably an economic focus because carbon can be and has been monetised (through carbon trading schemes). Other environmental factors are not so readily monetised so, as in any CBA, the emphasis is inevitably on those aspects that can be valued, however much one might attempt to reflect the importance of non-monetised factors.

Niels Faber, René Jorna and Jo van Engelen (Chapter 16) explore sustainability from the point of view of organisations, particularly the way in which the confusion surrounding "sustainability" hinders its implementation. They explore sustainability from a philosophical perspective and formulate a framework consisting of three aspects to

analyse the conceptual developments that underlie "sustainability": the artefact ("what"), goal orientation ("relative versus absolute") and (behavioural) interaction ("static versus dynamic"). They analyse contributions from both the theoretical (definitions) and the practical (indicators) spheres. Their focus is on sustainability in business and so organisational developments are used as a reference timeline. Based on observations and analyses, the authors suggest a new course for the sustainability discussion and its implications for the organisational context: a knowledge approach focusing on transparency and dialogue. This also implies that the emphasis in the sustainability discussion is changing from a merely environmental to an organisational and societal perspective.

Derk Jan Kiewert and Janita Vos (Chapter 17) also look at what sustainability means in practice for a firm of consulting engineers and how to make sustainability operational within organisational practice. However, their focus is on the individual's conception of sustainability. They explore three interrelated questions: A "what-question", an "attribute-question" and a "who-question". The complexity of these questions needs a tailor-made interpretation of sustainability. Proposing a framework that can be used for obtaining such a tailor-made interpretation of sustainability the authors have incorporated the notion that staff members need to make sense of sustainability for themselves. By using a cognitive mapping approach, a multidimensional space of sustainability can be identified. The interpretation of the dimensions of this space can then provide a definition of sustainability relevant to a particular situation.

An alternative approach to conceptualising sustainability, as suggested by Gibson *et al* (2005) and Bob Gibson (in Chapter 18), may offer some hope here, drawing many of the threads discussed above neatly together, and approaching sustainability from the point of view of using criteria or objectives that cross the boundaries of economic, social and environmental. This could challenge traditional TBL thinking and therefore provide a possible meeting place for engaging EIA, SEA and SA experts with EMS and corporate social responsibility (CSR) experts on organisational and capacity issues rather than focus on the tools themselves. While his focus is on SA the principles he espouses have great resonance across all tools, techniques and approaches for sustainability. Fundamentally this gets back to the roots of sustainable development.

Gibson's focus is that sustainability is an essentially integrative concept which is lost when sustainability is depicted as the intersection of social, economic and ecological interests and initiatives. Accordingly, many approaches to sustainability oriented assessments—at the project as well as strategic level—have begun by addressing the social, economic and ecological considerations separately and have then struggled with how to integrate the separate findings. The problem is exacerbated by the generally separate training of experts in the three fields, the habitual collection of data separately under the three categories and the common division of government mandates into separate social, economic and ecological bodies. The combined effect is not merely an absence of integrative expertise, data and authority but an entrenched tendency to neglect the interdependence of these factors. The three pillars or triple bottom line approach also appears to encourage an emphasis on balancing and making trade-offs, which may often be necessary but which should always be the last resort, not the assumed task, in sustainability assessment. There are, however, important concerns underlying advocacy

and application of some three pillar, limited integration approaches. Most significant are well-grounded fears that integrated, sustainability-based assessments may facilitate continued or even renewed neglect of traditionally under-valued considerations, especially the protection of ecological systems and functions. This problem, Gibson argues, needs to be addressed thoughtfully in judgements about how integration is to be done. His solution is to take sustainability as an essentially integrative concept and to design sustainability assessment more aggressively (as he puts it) as an integrative process.

Gibson sees this as needing to build sustainability assessment into a larger overall governance regime that is designed to respect interconnections among issues, objectives, actions and effects, through the full interrelated set of activities from broad agenda setting to results monitoring and response – no mean task. Assessment processes need to be designed with an iterative conception-to-resurrection agenda, aiming to maximise multiple, reinforcing net benefits through selection, design and adaptive implementation of the most desirable option for every significant strategic or project level undertaking. Central to this is the need to redefine the driving objectives and consequent evaluation and decision criteria to avoid the three conventional categories, to ensure attention to usually neglected sustainability requirements and to focus attention on the achievement of multiple, mutually reinforcing gains. In contrast to the widely held conception of sustainability that encourages trade-offs, Gibson seeks to establish explicit basic rules that discourage trade-offs as far as possible while guiding the decision-making on those that are unavoidable.

This is an approach that for me strikes a real chord and I have used it in my own teaching of Masters' students – getting them to develop sustainability assessment objectives under the Gibson integrated themes/criteria. This poses a real challenge to not think in the environmental, social and economic boxes we have all become inured with. It invariably gives them a collective headache, but one they also relish as they try to get to grips with what sustainability might actually be about. It's far from easy because we have for too long thought about sustainability in an overly simplified and compartmentalised way.

Other techniques, such as the use of ecosystem services (MEA, 2005) also offer ways of considering and evaluating sustainability in the context of land use and spatial planning (Sheate *et al*, 2008c). Ecosystem services – provisioning, regulating, cultural and supporting services – are, as an assessment technique, much favoured by economists who can see ways in which one can value such services (or the benefits accrued). However, they also may provide opportunities for enhancing win-win opportunities rather than encouraging trade-offs, and may be particularly well suited to spatial planning contexts. They also integrate well with the Gibson approach to sustainability above. Such alternative ways of approaching sustainability may encourage more collaborative working among the interested disciplines and therefore help build capacity to engage in truly interdisciplinary research that exchanges knowledge and experience across the boundaries of the tools used by specialists within and across disciplines. This would certainly help facilitate working together among EIA, SIA, HIA, SEA, EMS, TBL, CSR, LCA, CBA, etc specialists and the development of more common language and understanding.

Discussion

Working together - linking tools in practice

If there are benefits to linking tools, what needs to be done to facilitate this working in practice? There is a question as to how much we should seek to standardise tools and their linkage to other tools through the use of principles or frameworks when it fundamentally needs to be responsive to context. Broad principles may be fine, but not rigid frameworks. Adapting tools to fit the existing processes may be sufficient or using tools to adapt the processes. In the UK, for example, the offshore oil, gas and wind power licensing rounds were made subject to SEA which itself helped to create a planning process that previously was missing (Sheate *et al*, 2004).

From the discussions above, and the four thematic collections of papers here, it is clear that tools need to be integrated in an institutional strengthening process to ensure the actors involved are able fully to take them on board. To link tools becomes more difficult if there are no real mechanisms or incentives for actors to make those links. For example, in local authorities, even if they have a municipal wide EMS most probably it will be dealt with by different people from those who deal with SEA of land use plans. Even if there are benefits in terms of information sharing and flows and broader environmental efficiencies, it is unlikely to happen without the institutional capacity or communication routes to facilitate it.

Legislation

Legislation can help provide the impetus to making linkages between tools, if common requirements are embedded in the law. So, for example, the Water Framework Directive (WFD) 2000/60/EC – establishes a requirement for extensive public consultation on River Basin Management Plans (RBMPs) created under the WFD (Article 13). Such plans themselves are new, and generally for most EU Member States there is no existing planning process through which this requirement can be delivered. A new process is therefore required. RBMPs meet the criteria of the SEA Directive 2001/42/EC, and therefore SEA is most likely to be required. Here the SEA process can facilitate the delivery of the planning and consultation process (Sheate and Bennett, 2007; Carter and Howe, 2005). Both the EIA and the SEA Directives make provision for common or joint procedures, for example with Integrated Pollution Prevention and Control (EC IPPC Directive 2008/1/EC), though this is not an extensively used provision by Member States (Denmark is one example where this provision has been taken up) (Sheate *et al*, 2005). But such a provision makes an explicit link between tools, and could be used as a lever for ensuring such links are delivered in practice. In reality, of course, land use and spatial planning processes are often quite separate from pollution regulation and licensing processes in EU Member States, and so the potential links between the relevant tools are not facilitated, since different national legislation, different agencies and different people are likely to be involved in implementation of the different regimes.

Links between SEA and EMS are not helped either when SEA is legally mandated, e.g. in the EU through the SEA Directive, and EMS is a voluntary instrument, albeit supported in the EU in the form of EMAS by the Council Regulation (EEC) No. 1836/93, and

elsewhere by the ISO140001 standard. But the decision as to whether to apply EMS is a voluntary one, unlike SEA where a plan or programme either meets the SEA Directive criteria or it doesn't (notwithstanding ambiguity and legal interpretation). In such a case there will need to be alternative reasons as to why there should be linkage and cooperation between the tools – the law won't require it.

Research

To move the area of linkages among tools ahead needs targeted research focused on organizational and institutional capacity to link tools rather than merely focusing on the tools themselves. In other words, the past focus on methodological aspects of specific tools or on creating new tools perhaps needs to move on to examine more closely the way in which tools are used together, who they are used by and in what ways, and the capacity to use them. Capacity building among practitioners, decision-makers and stakeholders is critical, since often those skilled in SEA have little experience or expertise in EMS or LCA, or vice versa. Building multidisciplinary and interdisciplinary teams is essential. Many existing networks, including IAIA, by their nature tend to reinforce disciplinary (or at least specialist) boundaries, even while there are diverse interests represented. Individuals also often stick with the same sets of comfortable and friendly networks, rather than breaking out into new networks, making new contacts and sharing different experiences and knowledge among a wider group of people.

Perhaps the greatest challenge lies within the academic preoccupation with published outputs in well established and internationally recognised journals (for which read high impact factor, because of large constituency); a preoccupation that is fundamentally biased toward long-established single academic disciplines, rather than applied interdisciplinary research which is often working at the interface between research and practice. Only recognition of the fundamental misuse of impact factors as indicators of individual academic performance (Amin and Mabe, 2000; ESEP, 2008) and a change in the way research funding is allocated will allow and encourage researchers to engage more in interdisciplinary research and communicate across boundaries, share knowledge of each others' literature and through publication in each others' journals.

Conclusions

For assessment and management tools to be effective, they need to be integrated into existing planning or decision-making processes – or other decision-making processes need to be adapted. This creates challenges for linking with other tools if no explicit planning or decision-making process already exists between tools, e.g. SEA and EMS, to facilitate such linkages being established. With the rapid expansion of SEA application, for example, comes the opportunity and indeed an urgency to make links to EMS in particular, to facilitate follow-up. But the links still won't happen if the institutional and cultural capacity is not in place or the personal motivation of staff is not there to use the tools available. This points to the need for institutional strengthening, i.e. less focus on the actual tools and more on identifying the organisational and cultural prerequisites for developing processes that seek to build on the benefits of linking tools. This in itself is

difficult since it may mean departing from the organisation's usual reality and existing structures and routines. Active mechanisms, such as the use of scenarios, foresight studies, public participation or debates about sustainability, among others, may provide opportunities for linkages to be made by providing common 'meeting places'. But to succeed there will need to be benefits of linking tools and these will need to be mutual, not one way, if linking is to be actively encouraged.

A priority, therefore, must be to provide many more case study examples of tangible benefits that linking tools can provide, and across a range of tools. In practice, there will need to be individual champions within organisations (public and private) who have the vision and drive to make the links happen, and to create imaginative opportunities through which links between tools can be delivered. What is clear is that links won't happen by themselves - there are too many institutional and procedural hurdles created by the disparate evolutionary histories of each of the separate tools. But that doesn't mean there isn't value in trying to deliver practical benefits beyond the theoretical synergies that already can be clearly recognised. Companies and authorities and their sustainable development managers could play a key role here, since if the potential benefits from linking tools can be realised, and individuals motivated, real efficiencies and cost saving, as well as better environmental performance, could be delivered.

Projecting forward another ten years, will links between tools have become more routine? I hope and suspect they will, primarily because of the driving force of sustainability (and not just climate change, critically important though it is). Climate change may help drive these linkages, as long as it doesn't send us down the route of an overly uni-focal approach to our selection of tools. But events – some of them climate change driven (e.g. global and regional water shortages; poor urban air quality and health impacts) - will necessitate the use of more multi-focal and even integrated tools to ensure we don't lose sight of the bigger sustainability picture. In fact climate change adaptation planning may contrast with climate change mitigation in its use of tools – it will fundamentally be focused on impacts and quality of life and how to prevent, prepare, respond and recover from climate driven events and consequences. Better linkages between tools for sustainability, as a consequence, will be needed even more by businesses, authorities, and the public alike.

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Appendix 16

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A. has contributed to collaboration (0-33%).
B. has contributed significantly (34-66%).
C. has essentially performed this study independently or undertaken the majority of the work (67-100%).

Declaration for the individual elements	**Extent (A,B,C)**
1. Design of the project including formulation of problems to be tested and design of individual experiments.	B
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3. Involvement in analysis and data collection.	B
4. Presentation and interpretation and discussion of the results obtained in article form.	B

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Strategic approaches and assessment techniques—Potential for knowledge brokerage towards sustainability

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ABSTRACT

The role of science in policy and decision-making has been an issue of intensive debate over the past decade. The concept of knowledge brokerage has been developing in this context contemplating issues of communication, interaction, sharing of knowledge, contribution to common understandings, as well as to effective and efficient action. For environmental and sustainability policy and decision-making the discussion has addressed more the essence of the issue rather than the techniques that can be used to enable knowledge brokerage. This paper aims to contribute to covering this apparent gap in current discussion by selecting and examining empirical cases from Portugal and the United Kingdom that can help to explore how certain environmental and sustainability assessment approaches can contribute, if well applied, to strengthen the science–policy link. The cases show that strategic assessment approaches and techniques have the potential to promote knowledge brokerage, but a conscious effort will be required to design in genuine opportunities to facilitate knowledge exchange and transfer as part of assessment processes.

1. Introduction

Knowledge brokerage has become a strong driver in current sustainability discourses, with a body of literature in multiple scientific areas that is promoting the importance of knowledge sharing and transfer as a way of breaking down barriers that impede interaction, healthy communication and collaboration (e.g. Cash and Moser, 2000; Preece et al., 2000; Cash et al., 2003; Walter et al., 2007; Ward et al., 2009). This can be found in transdisciplinarity, in the interface between scientific research and policy-making, or between scientific research and corporate business, technological innovation, social capital and organizational networks. Often it is linked to how different social network structures influence the ability of organizations to determine access to and transfer of knowledge and enhance innovation, but it is also linked to the need to approach multi-scaling environmental problems and promote the development of holistic and integrated approaches to sustainability.

Strategic assessment approaches, such as strategic environmental assessment (SEA) and sustainability assessment (SA), and the techniques they employ (e.g. stakeholder engagement, use of objectives and indicators, network analysis, geographical information systems), have the potential to act as platforms for knowledge brokerage, certainly dependent on how they are used but largely because of the transdisciplinary nature of the decision-making processes they support and the information exchange they can facilitate among stakeholders (Runhaar and Driessen, 2007; Partidario and Sheate, 2009; Sheate and Partidario, 2009). However, the way and context in which they are used are also significant factors. This paper draws on lessons from practical experience of the application of SEA/SA in Portugal and the UK, to explore the conditions that facilitate the knowledge brokerage potential of such approaches, and potential barriers to success. Such a perspective offers significant benefits for improving the performance, and consequent outcomes, from the approaches themselves, and for the wider exchange of knowledge and understanding of stakeholders at the science–policy interface.

2. Information vs knowledge, and the role of science in environmental policy and decision-making

Society is faced today with challenges that range from serious global problems to innovative opportunities, supported by uneven information, often too scarce on a few pragmatic issues and abundant, but not entirely reliable, on too many debatable issues. Funtowicz and Ravetz (1993) recognised that because of the many uncertainties dominating certain policy areas science alone was not sufficient to provide the answers. Sarewitz (2000) suggests that rather than resolving political debate, science can often become ammunition in partisan squabbling and that scientific experts on each side of the controversy can cancel

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each other out, and the more powerful political or economic interests prevail. Recognising the need to address the increasing clarification and communication in environmental policy, the New Zealand Parliamentary Commissioner for the Environment (2003) issued a paper on the role of science in environmental policy and decision-making, addressing the reality of policy-making and the uncertainty debate, and the equal relevance of traditional-knowledge to policy and decision-making. Holmes and Clark (2008) addressed a broad range of issues associated with the science–policy interface, exploring how increased knowledge, and its effective use, may improve policies and regulatory decisions. These issues are now increasingly central to the emerging field of 'sustainability science' (Kates et al., 2001; Clark and Dickson, 2003), where the environmental, social and economic components of sustainability might be considered analytical/descriptive knowledge. The overarching goal of sustainability, which might be categorised as 'justice' (incorporating the essence of equity and needs of current and future generations) could, on the other hand be classed as normative knowledge (Burger, 2009).

Many assessment approaches rely on a (rationalist) positivist assumption that the provision of information to the decision-making process will inherently improve decisions (Thérivel, 2004; Fischer et al., 2009); while that may or may not be so (it is more generally acknowledged that the reality is likely to be one of 'bounded rationality', as developed in Nilsson and Dalkmann, 2001), assessments are more likely to influence decision-making if those decision-makers are sharing and acquiring *knowledge,* not just information. 'Knowledge' (in the sense of Bloom's Hierarchy of the Cognitive Domain (Bloom et al., 1956)) implies information that has been processed through learning to be able to be recalled and so create understanding and insight. Fischer et al. (2009), identify the potential for SEA to facilitate improved learning (about SEA and environmental impacts) among practitioners and decision-making, while Runhaar and Driessen (2007) and Runhaar (2009) recognise the importance, to effective SEA, of decision-makers being open to different values held by stakeholders.

Learning in policy contexts can be interpreted as a process whereby beliefs about key components of policy (such as problem definition, results achieved, goals, and actors' strategies and paradigms) are challenged (if not changed) as a result of the focus on selected thematic issues, and governance mechanisms are refined or changed to address the complexity and uncertainty intrinsic to such issues and sustainability in general (Fischer et al., 2009). The analysis of learning can be linked to the examination of different types of knowledge in the policy process—distinguishing between information, data, social science models, arguments, and paradigms as sources of policy learning (Radaelli, 2007). Procedures that recognise the processes for and barriers to knowledge use should, therefore, help *ex ante* assessments contribute more effectively to policy-making and underlying learning processes (Wallington et al., 2007; Hertin et al., 2009. Turnpenny et al., 2008; Nilsson et al., 2008). A key challenge is therefore how strategic techniques and approaches can be used to communicate to decision-makers essential information about choices between alternative strategies, related pressures on environmental and social issues and consequences for sustainability (Vicente and Partidario, 2006).

Knowledge, however, can be owned or possessed by an actor, and can be generated in a number of contexts or forms, including analytical/descriptive knowledge (knowledge about that which is), and normative knowledge (about that which should be) (Burger, 2009). Knowledge is also, according to Bloom et al. (1956) a prerequisite to be able to analyze, synthesise and evaluate. But 'large quantities of knowledge produced for the benefit of policy are never used in that policy-making' (In't Veld and de Wit, 2000), reflecting what Weiss (1975) called the problem of 'little effect', and as Owens et al. (2004) have noted, such limited effectiveness can often be attributed to shortcomings in communication, different epistemological positions, and also to wilful neglect.

3. Knowledge brokerage and strategic approaches

The theory and practice of knowledge management, knowledge transfer and knowledge brokerage is an emerging field (Clark and Kelly, 2005) and has found prominence particularly in the health field (Findlay, 2003). A useful definition is:

> "Knowledge brokering is one of the human forces behind knowledge transfer. It's a dynamic activity that goes well beyond the standard notion of transfer as a collection of activities that helps move information from a source to a recipient. Brokering focuses on identifying and bringing together people interested in an issue, people who can help each other develop evidence-based solutions. It helps build relationships and networks for sharing existing research and ideas and stimulating new work. Knowledge brokering supports evidence-based decision-making by encouraging the connections that ease knowledge transfer". (Canadian Health Services Research Foundation, 2003).

Knowledge transfer and its modalities are discussed in a number of fields. For example in the business world (Walter et al., 2007), knowledge transfer is analyzed in terms of social capital circulation and sharing, and how knowledge can be shared in professional networks with both private and collective benefits. The quality of knowledge transfer depends on the type and quality of relationships between partners, given the trade-off between organizations with learning strategies and others with efficiency strategies. Tools for knowledge brokerage are numerous and should be integrated into new methods for connecting science and practice. The usual method (e.g. incorporating scientific information into the policy process through scientific assessments channelled to policy-makers—as typically happen with environmental impact assessment and earlier forms of strategic assessments) is now challenged by new tools (e.g. van der Vorst et al., 1999; Vicente and Partidario, 2006; Kornov et al., 2005; Sheate and Partidario, 2009; Sheate, 2009). Cash and Moser (2000) suggest the concept of "boundary institutions that straddle and mediate the divide between science and policy". In those institutions decision-makers are no longer passive recipients of information, but participate in the research and learning process towards the sharing of knowledge. Knowledge brokerage would be, according to those authors, one of the ways to reach an effective adaptive management through efficient interactions between science and decision-making. Compared to traditional science–policy interactions knowledge brokerage would, therefore, help create greater dialogue between 'producers' or creators of scientific information and recipients or users (decision-makers).

Ward et al. (2009) summarise the three main theories available for underpinning knowledge brokerage: knowledge management (relatively passive dissemination of knowledge); linkage and exchange (active engagement between researchers and decision-makers); and capacity building (fostering greater self-reliance in both the researcher and the decision-maker, e.g. through enhancing the knowledge transfer/communication skills of the researcher and the analytical and interpretive skills of the decision-maker). They also recognise the importance of sufficient time and resources being allocated for successful knowledge brokerage to occur, and that in practice the knowledge brokerage process is poorly understood.

So, for knowledge brokerage to succeed in the context of environmental decision-making a number of conditions are likely to be needed:

- The appropriate range of stakeholders needs to be engaged in the decision-making process;
- Resources, time and space need to be created for engagement and exchange of knowledge to take place;

- That time and space need to provide a conducive, open-dialogue and non-judgmental environment in which that exchange can take place;
- A proponent will need to be alerted to the advantages of knowledge input to make him/her receptive to external inputs to decision-making;
- A proponent will need to be actually willing to make use of other forms of knowledge.

Knowledge brokerage can reside in individuals, organizations or structures (Ward et al., 2009). In this paper we see knowledge brokerage as occurring through strategic assessment techniques providing a key medium by which brokerage facilitates strategic planning for sustainability (Partidario and Sheate, 2009; Sheate and Partidario, 2009). Such techniques may include, for example, participative stakeholder engagement, for example through workshops or co-responsible led short-term initiatives; smart communication techniques; network analysis techniques; interactive use of geographical information systems and mapping; scenario and futures analysis; SWOT analysis. The SEA/SA team may also act as brokers in facilitating knowledge exchange and transfer, utilising these techniques, and in the right circumstances may provide an active linkage and exchange mechanism and potentially help to build capacity in decision-makers to use assessment information more effectively.

The context of finding evidence-based solutions to certain environmental or sustainability problems and challenges provides an arena within which these techniques can establish the necessary institutional and policy framework for stakeholder and public engagement, thus creating the required institutional and social networks that will enhance knowledge transfer and the identification of knowledge gaps and needs of decision-makers and stakeholders.

The role of knowledge brokerage in stimulating the engagement of the public appears to be a crucial opportunity to innovate the way public participation is being carried out in strategic approaches. In SEA and SA the practice with public consultation and participation is often limited to the formal moments in which the public is offered the opportunity to comment on existing proposals (Thérivel, 2004; EC-COWI, 2009). The engagement of the public in the establishment of visions and identification of priorities that precede the formulation of proposals is still more the exception than the rule. Current practice in strategic assessments reveals that public participation timings and type of contributions remain very much the same as with EIA practice (see public participation requirements in the EU Directive 2001/42/EC). But if we recognise that both SEA and SA deal with issues and scales that are much less tangible than in EIA, the action under discussion is therefore not so evident, as well as the perception on the respective consequences. So the reactive nature of such public participation practices does not seem to be working for strategic dimensions, as clearly expressed in the study conducted by COWI for the European Commission (EC-COWI, 2009) (see also Thérivel (2004) where she earlier raised a similar concern).

From the above it can be concluded that public participation in strategic assessment requires new forms of information and engagement, and knowledge brokerage has the potential to generate more participative environments and attitudes. Likewise there is a general participation fatigue in many developed and developing countries alike, derived from the inconsequent participative processes that take time and do not bring visible benefits to those publics involved. However this situation may change if the purpose of public engagement becomes the building and inter-change of knowledge, towards creative solutions to identified problems, rather than simple information transfer mechanisms through consultative processes.

Strategic techniques and approaches in planning and assessment have the potential to support knowledge brokerage processes by enabling institutional learning processes, the use of knowledge in policy decisions and the connectivity between research and policy-making. Attention has often been put on the nature of techniques used (e.g. guidance produced by governments and international agencies) (Kornov et al., 2005), and their performance vis-a-vis environmental and sustainability outcomes, rather than on the substance of science–policy linkages and on what and how these techniques can contribute to decision processes. Rather less focus has been placed on the substance of such linkages, as critically reviewed by van der Vorst et al. (1999) (and see Emmelin, 2006; Sheate, 2009). In other words, what is it that these techniques can contribute to decision processes and how can this be delivered? The 'what can be delivered?' is often a question of willingness, purpose and substance. The 'how it can be delivered?' is, on the other hand, a question of the multiple analytical and non-analytical techniques integrated into well conceived open processes that can enhance effective assessment, including governance through institutional frameworks, organizational relationships and learning processes.

Knowledge brokerage, then, offers the opportunity to move strategic assessment techniques beyond information provision and learning to facilitate the sharing of different forms of knowledge and improve the substance of science–policy linkages, thus enabling better problem solving among stakeholders and decision-makers alike. These are the issues we seek to explore from empirical examples in Portugal and the United Kingdom (UK), to see whether, and to what extent if so, such strategic assessment techniques can help deliver knowledge brokerage as part of their assessment processes.

4. Methodology

This paper is the first exploratory step in developing a more systematic framework for evaluating strategic approaches and assessment techniques for their knowledge brokerage potential, and therefore ultimately to build knowledge brokerage into such approaches and techniques more explicitly in the future.

Six case studies of SEA/SA/sustainability strategies were selected, three from Portugal and three from the UK, on the basis of the authors' experience and involvement (in various capacities) in these case studies, and according to the following criteria:

- Range of geographical scales;
- Mix of strategic approaches;
- Range of techniques used within the assessment approach;
- Mix of stakeholder/public engagement approaches;
- Mix of types of proponent (authorities, agencies).

Good practice regarding the potential for knowledge brokerage in the assessment approach was not a prerequisite for inclusion as it was felt that useful lessons could be learned from less than optimum as well as good practice. The approach was therefore a summative (*ex poste*) evaluation of the case studies in terms of their knowledge brokerage potential (cf formative evaluation which would be undertaken during the assessment processes (Bingham and Felbinger, 2002). Each case study is described below and for each a brief discussion is provided on the techniques used, what worked well and what did not for knowledge brokerage (success factors and barriers to success).

We have not attempted to assess the success or otherwise of the *SEA* or *SA processes* in these cases (i.e. whether they were good practice SEA/SAs as it is generally understood concerning their environmental and sustainability integration and strategic assessment capacity), rather we have focused on the extent to which they helped facilitate knowledge brokerage. We have then evaluated each case study against some preliminary criteria drawn from the literature discussed above, assigning simple three-point qualitative scores based on the evidence presented in each case study:

- Range of stakeholders (diverse, moderate, low)
- 'Opportunity space' to present/offer own knowledge (good, moderate, poor)

- Receptiveness of proponent to substantial input into decision-making (high, medium, low)
- Conducive to knowledge exchange (able to exchange knowledge freely in a non-judgemental environment) (good, moderate, poor)
- Willingness (of proponent) to make use of different types of knowledge (high, medium, low)

We recognise, however, that this is only a first step.

5. Empirical cases

5.1. Case Study 1—Loulé Municipal Sustainability Strategy, Portugal

5.1.1. The story background

In 2005 the municipality of Loulé, in the Algarve Region, southern Portugal, intended to initiate a Local Agenda 21 (LA21) process. The idea was that LA21 could provide a baseline for environmental and social problems, as well as the formulation of actions and measures to resolve those problems. However the municipality lacked an integrated vision for sustainability and a strategic diagnosis of how environmental problems linked to social issues and to economic pressures. At the same time the Loulé local municipal plan entered the review process, and such an integrated vision and framework (combining social, economic and environmental objectives) and an integrated strategy for linking them together, would provide an umbrella policy framework for municipal master planning. LA21 was insufficient to provide such strategic context and it was then decided to develop a Local Sustainability Strategy (LSS) that would adopt an integrated sustainability approach; be oriented by feasibility thresholds and quality objectives; result from a multi-stakeholder engagement process; and could enable the management of different stakeholders' expectations. The team developing the LSS actively engaged local officers in the municipality, who managed empirical knowledge, and was supported by a science-based knowledge team from IST (Instituto Superior Técnico) at the Technical University of Lisbon. Stakeholders were diverse and included local schools, municipality departments, business association, farmers, tourism developers, commerce association and local entrepreneurs, elected representatives, consultants, the media as well as local citizens.

5.1.2. Tools and techniques used

Key methodological aspects included the adoption of an integrated approach, including health, rural development, information technologies, human development, physical environment, ecological aspects, governance issues, among others. A SWOT analysis based on a selective diagnosis was crucial to focus the analysis on the key aspects to be considered in an action programme, driven by problems and opportunities. This analytical component of the strategic development was deeply coupled with three important aspects: a multi-stakeholder diverse engagement process; the full-involvement of the municipality through the engagement of several departments, and the change of the municipal institutional framework, as well as the establishment of partnerships for the implementation of the intended actions. The decision-maker was, therefore, highly receptive to other inputs and good opportunity space for knowledge exchange was created. The multi-stakeholder process included four large citizens' fora during one year, a citizens' survey, direct interviews with local leaders, publication of paper and online newsletters, organization of seven thematic workshops, meetings with the municipal parliament (the elected representatives) and with the business association. A website was set up and kept active for about two years.

5.1.3. Success factors for knowledge brokerage

The tools and techniques used were diverse, but some were particularly useful to stimulate knowledge brokerage and provide a conducive environment. Those include the full commitment of the head of cabinet of the Mayor and municipality director and the full engagement of the local municipality team in the process, by which they learned about the concepts, the mechanisms and are now running various action projects that were identified in the LSS. A new institutional framework was introduced at the municipality level to ensure the overview of the LSS. It also included the relevance to local citizens and the full acknowledgement of findings achieved in the public for a; the need to adopt different methods to deal with different stakeholders; response to all questions sent by e-mail, or posted on the Internet; and the still ongoing, demonstration of outcomes, including the use of the LSS to set the framework for the review of the local master plan.

5.1.4. Barriers to success for knowledge brokerage

The Mayor himself assumed a none-too strong political commitment and leadership. While participating in every public event related to the LSS he made only brief references to the importance of the LSS in his discourse at a later stage. The insufficient human resources in the municipality impeded a more fully-fledged investment, while some suspicious attitudes of local stakeholders toward the good intentions of the initiative and lack of engagement by some municipality departments also acted as bottlenecks to the whole process (and therefore only a moderate level of willingness to make use of different types of knowledge was exhibited). The LSS website is now inactive due to insufficient municipal commitment and investment.

5.1.5. Lessons learned

Key lessons learned with this case is that political commitment at the highest decision level is crucial, as well as good communication skills and tools with different types of stakeholders to ensure that people understand what is being said and done, which requires adaptation to the multiple type of stakeholders to be engaged and the correspondent different types of knowledge involved, which require also different engagement techniques. This well reflects the knowledge brokerage capacity of adopted tools for the LSS. Also the capacity to use local stakeholders to communicate with citizens and other groups is very important, to ensure the terminologies are explained, the emphasis is on critical local issues, and that the feedback to issues raised is enhanced.

5.2. Case Study 2—SEA of the Portuguese National Strategy for Integrated Coastal Zone Management (NSICZM)

5.2.1. The story background

The NSICZM was developed following Recommendation 2002/413/EC of the European Parliament and the Council, and the established general principles and options for a European Integrated Coastal Zone Management Strategy. In the absence of specific legislation concerning the SEA of policies in Portugal or at the European level, this case illustrates a voluntary initiative of the national water authority, the INAG, to undertake a strategic assessment of a national policy concerning coastal zone management. The SEA thus undertaken has enabled INAG to be informed on the risks and opportunities of following certain policy options, decide on changing options in the face of environmental and sustainability risks and benefits, and share such information with the wider public and institutions through the reporting together of the SEA and the NSICZM, as companion processes and reports.

The SEA of the NSICZM provides a show case of good governance at the policy level, revealing how SEA can be used as an enabler and facilitator of integrated and sustainable policy decisions, and how SEA and policy-making processes jointly can be carried out with mutual benefits regarding shared information, knowledge creation and team collaboration, jointly motivated by the similar purpose of enhancing a strategic, sustainability integrated policy instrument.

5.2.2. Tools and techniques used

Key methodological aspects included an integrated approach, including health, socio-ecological approaches, adaptations to climate change, coastal economic development, institutional framework and models of governance. Critical factors for decision-making (Partidário, 2007a,b) were identified and discussed with policy-makers, policy analysts and multiple stakeholders, as a way of focusing the strategic discussion around fundamental themes relevant for the sustainability of the NSICZM. A strategic diagnosis based on trend analysis, coupled by a SWOT analysis provided the grounds for a focused discussion on possible futures based upon alternative strategic options (Partidário et al., 2009). This enabled a relatively accessible set of information for stakeholder interaction in workshops. The interpretation of consequences for the sustainability of the coastal zone was then the result of iterative exchange between policy-makers, policy consultants and SEA consultants, based upon the analysis of opportunities and risks for sustainability.

5.2.3. Success factors for knowledge brokerage

Key success factors included the trust of policy authorities on the potential of SEA to provide strategic direction for sustainability; the focused discussion in SEA around critical factors for decision-making that integrated strategic NSICZM issues, environmental issues and the framework of relevant macro-policies; the adoption and discussion around strategic alternative options as an anchor for the formulation of policies; and also the way policy-making process and SEA were well linked up throughout the entire process, with strong iteration throughout. These provided good opportunity space for knowledge brokerage with the authorities being receptive to other inputs to the decision-making process.

5.2.4. Barriers to success for knowledge brokerage

The whole process happened in a relatively short time which prevented a more enlarged strategic discussion being conducted with critical stakeholders, particularly with respect to options for ICZM, as well as their opportunities and risks (only a low range of stakeholders engaged). Stakeholder engagement was limited to a couple of sessions for consultation and written comments. There were also different understandings on strategic concepts between the policy consultants and the SEA team, which slowed down the process of knowledge transfer (i.e. creating an environment only moderately conducive to knowledge brokerage). The discussion around ICZM options and scenarios was basically stimulated by the SEA team, since the policy consultants were more directed towards the formulation of measures to meet set objectives (reflecting ultimately a relatively low willingness to make use of different forms of knowledge).

5.2.5. Lessons learned

This is a case where the success of SEA was very much due to the political commitment at high levels of decision-making (including the President of INAG and the Secretary of State for Land-Use Planning) and the political trust in the potential of SEA to enhance sustainability and better national strategies for coastal integrated management. This well reflects the knowledge brokerage capacity of SEA. But strategic understanding and respective tools need to be aligned across SEA and policy-making teams. A rather technocratic and rational-based policy may become too rigid and inflexible to enhance the value of SEA as a strategic-based and integrated policy approach.

5.3. Case Study 3—SEA of the Portuguese Electricity Transmission Network Development and Investment Plan (PDIRT) 2009–2019

5.3.1. The story background

The initial entry point for SEA was the legal requirement established by national legislation for the environmental assessment of plans and programmes. The sectoral plan proponents regarded the SEA initially as performing a role similar to EIA—to develop a cause–effect analysis and assessment of the environmental impacts, or consequences of adopting certain proposals in the investment plan, as a sectoral plan, and look for mitigation measures. However, after several meetings through which a closer integrated look into the problem was developed—and by which the needs of the investment plan, and its legal restrictions, were put on the table side by side with environmental constraints and barriers, and sustainability aims, including renewable energy targets—plan proponents agreed to adopt a methodology for SEA that would look for, and conduct, a strategic discussion around options for investment integrating both opportunities and risks for the environment and sustainability. The growing interest and trust of the proponents in the SEA outcomes were reflected in the multiple iterations undertaken jointly to develop the plan and the SEA. All possible options were discussed in view of the opportunities and risks for the three critical factors for decision-making adopted: Fauna, Land-Use Planning and Energy. The options finally selected from this integrated discussion showed robustness in face of public and institutional analysis, and a follow-up programme is now being established to monitor and assess the investment plan during its three year implementation period (the investment plan has a 10 year horizon, but is revised every three years).

5.3.2. Tools and techniques used

Key methodological aspects included an integrated approach, including health, population and cultural heritage, priority for renewable energy and energy efficiency, and ecological I issues, in particular avifauna. Existing practice and guidance for EIA of high-voltage electricity transmission was useful in streamlining the key environmental aspects that were worth consideration at strategic levels so that the final design of the transmission network could enable avoidance of most critical environmental impacts. In addition sustainability opportunities were considered, namely with respect to energy policy priorities, as well as land-use organization. These were incorporated through the three selected critical factors for decision-making (Partidário, 2007a,b), and respective criteria and indicators, which proved to be quite sufficient for the purpose. A strategic diagnosis based on trend analysis, coupled by a SWOT analysis, provided the grounds for a focused discussion around four initial alternative strategic options. Strong iteration has led to the discussion of various changes to these option, up until a final solution was found as agreeable both from a technical as well as environmental and sustainability perspectives.

5.3.3. Success factors for knowledge brokerage

The trust of investment plan proponents on the potential of SEA to provide strategic direction for sustainability, and to identify the critical risks and opportunities that could help enhance the plan, is a major success factor (providing good opportunity space and reflecting a high level of receptiveness). The iterative discussion around strategic options was an anchor for the formulation of final proposed plan, which was very well-accepted by the community, particularly as it showed that key concerns, that can only be dealt with at project level, were already being considered (e.g. health implications in populated areas). The communicative capacity of proponents that had the ability to expose the strong link of the plan with SEA—and exposed, in a very transparent way (and one that was conducive to knowledge brokerage), the issues involved—together with an expansion to 60 days of the traditional 30 days for public consultation, were among the other success factors.

5.3.4. Barriers to success for knowledge brokerage

The existing tension created by project EIA of electricity transmission has generated great suspiciousness among many stakeholders involved, particularly municipalities, many NGOs and environmental / cultural / health authorities. This also led to rather a project-level

focus in many stakeholder discussions, with issues raised that were only relevant at project level, and a corresponding tempering of the willingness to make use of such knowledge.

5.3.5. Lessons learned

The growing interest and trust of the proponents in the SEA capacity and outcomes is crucial to achieve the desired ownership of the instrument. To that end the various discussions held between plan proponents and the SEA team were instrumental in allowing the sharing of knowledge and understanding of how the plan could be designed to satisfy, as far as possible, environmental and sustainability priorities. This reflects well the knowledge brokerage capacity of SEA.

5.4. Case Study 4—SEA of the Deer Commission for Scotland (DCS) Strategy for Wild Deer (2008–2028)

5.4.1. The story background

The SEA of the draft Strategy for Wild Deer in Scotland (the Strategy) (DCS, 2007) was required under the European Community SEA Directive (2001/42/EC) and the Environmental Assessment (Scotland) Act 2005 (which extends the provision of the SEA Directive to a wider range of plans, strategies and government proposals). The SEA was carried out alongside the development of the Strategy and sought to ensure that the Strategy contributes positively to the high level of environmental protection now expected by the Scottish Government. This new Strategy for Wild Deer in Scotland is a joint-agency strategy to encourage a more sustainable and integrated approach to deer management in the broader context of land management. Through this approach, the new Strategy for Wild Deer in Scotland is intended not simply to guide the work of DCS as an organization, but to be a cross-agency national strategy for wild deer, sitting alongside other land-use strategies such as the Scottish Forestry Strategy and the Forward Strategy for Scottish Agriculture. The Strategy sets out a long-term Vision, some Guiding Principles and a series of Objectives and Actions for future deer management.

5.4.2. Tools and techniques used

The SEA was undertaken in parallel to the development of the draft Strategy with considerable interaction between the SEA team and the Strategy team. In addition, the SEA process involved a combination of formal and informal engagement with relevant stakeholders throughout the development of the Strategy. The SEA team engaged with the Strategy development process, over an extended period from March 2006 to October 2007, as the Strategy development process unfolded. A range of different mechanisms were employed including; meetings with staff, phone conversations, e-mail communications, engaging with the consultations on the draft Strategy and Strategy Scoping Report, and workshops with the Strategy Steering and Advisory Groups. The main meetings and workshops in which the SEA team was involved included a number of Steering Group and Advisory Group meetings and with DCS staff and other agencies. While formal consultations were public, a more limited range of interested parties were involved in the Steering and Advisory Groups.

In the case of the high level assessment of the Strategy, the approach to assessment of alternatives sought to:

- Understand the long-term drivers of change affecting the management of wild deer;
- Establish the 'No Strategy' (Business-as-usual extended over a 20 year timescale) versus 'Strategy' scenarios; and
- Identify a range of management approaches that could potentially respond to future changes.

The Strategy options were considered iteratively with the development of the Strategy. A suite of alternative management approaches for wild deer, which could enable the Strategy to respond to future changes and unexpected or unforeseen events, were identified through exploring future possible influences resulting from six key factors (drivers) of change. These were not assessed as part of this strategy-level SEA as it would be more appropriate to assess them at the subsequent action plan level and regular reviews.

A "cause and effects" mapping approach, was used to link up factors of change and sub-influences with management approaches and their potential effects, and provided a means of understanding better how Strategy Actions might be implemented and have an impact on the ground.

5.4.3. Success factors for knowledge brokerage

Delays in the development of a clear direction for the Strategy provided time for iteration and input from the SEA team into the development of the strategy. Given the wide range of new strategies now being developed in Scotland the SEA process can offer real help in thinking strategically, including the need, with a long-term strategy, to establish a clear ongoing strategy and review process. This has important implications in terms of what the SEA of the strategy could address now or at a later review. An example is the long-term thinking and prioritisation of long-term drivers of change, initiated by the SEA team and recognised by stakeholders as a useful element of the whole process. The use of causal chain analysis (Sheate and Kiely, 2007) proved to be useful to convey understanding of the levels of alternatives and therefore where best to assess those alternatives (e.g. as part of lower level action plans rather than as part of the high level strategy). These techniques helped in creating opportunity space for knowledge brokerage, e.g. in Advisory Group meetings, and encouraged a greater degree of receptiveness on behalf of the proponent to other inputs.

5.4.4. Barriers to success for knowledge brokerage

A concern among some stakeholders, and to some extent the DCS itself, was that SEA should not be seen to be driving the whole strategy process. The inherent challenge of trying to deliver a multi-agency strategy which had to meet very different objectives among their different stakeholders meant that some were suspicious of the strategy potentially being environment-led, resulting in practice in only a moderately conducive environment for knowledge exchange, and a moderate willingness to make use of other forms of knowledge.

5.4.5. Lessons learned

DCS and stakeholders recognised that SEA had helped to shape the strategy in a positive way, and helped in the development of an ongoing monitoring strategy and review process. The SEA process provided knowledge of strategy to benefit the strategy development process. Long-term thinking and causal chain mapping allowed stakeholders to understand the assessment process and its relevance in a visual and interactive way.

5.5. Case Study 5—Integrated SA (incorporating SEA and Health Impact Assessment) of the Greater London Authority's Water Strategy

5.5.1. The story background

The GLA requires that an integrated SA, incorporating Strategic Environmental Assessment (SEA) and Health Impact Assessment (HIA) (i.e. a single appraisal), is undertaken on their strategies. The approach broadly followed the Government's SA guidance for Regional Spatial Strategies and Local Development Documents (ODPM, 2005; ODPM, 2006) which integrates the requirements of the SEA Directive and Regulations. However, the approach was adapted where necessary to meet the GLA's requirements. The SA also integrates health and equality of opportunity. For a number of reasons, but particularly the London Mayoral elections in 2008, the process has been a protracted one from 2006 through to 2009.

The objectives of the draft Water Strategy were:

- To secure a fair share of water for Londoners and London's water-related environment through the best use of the available water;

- To minimise the release of wastewater into the clean water environment;
- To reduce the threat to people and their property from flooding and to mitigate its effects.

5.5.2. Tools and techniques used

A key technique used was a workshop with key health stakeholders as an essential component of the HIA, and therefore the SA process. A workshop was therefore convened as part of the SAs of the Water Strategy (GLA, 2009) (and the Climate Change Adaptation Strategy being developed alongside it). The purposes of the workshop were to:

- Raise awareness among key health stakeholders about the Water Strategy and Climate Change Adaptation Strategy;
- Provide an opportunity for stakeholders/experts to consider the potential impacts of key aspects of the strategies on health determinants, health outcomes and health inequalities;
- Identify gaps in evidence and ways of addressing these gaps; and
- Provide some clear recommendations that would guide the SAs of the strategies.

These purposes reflected the receptiveness of the proponent to receive external input and the willingness to make use of other forms of knowledge and expertise.

A range of stakeholders were invited to the workshop because of their expertise on the potential health impacts of the strategies being considered. A causal chain 'carousel' exercise was undertaken where stakeholders were able to comment on and annotate the causal chain diagrams. Some of the impacts differentially affect certain vulnerable groups and could be significant cumulatively. The causal chains seemed to suggest that there could generally be negative effects from many of the water management options considered, although the overall effects are likely to be positive compared to the negative 'effect' of taking no action at all.

5.5.3. Success factors for knowledge brokerage

The Health Workshop (see GLA, 2009) proved to be particularly valuable in engaging with a key group of stakeholders that might not otherwise have engaged in a traditional SEA/SA, but the focus of the integrated appraisal to incorporate health impact assessment meant that valuable issues were identified by the stakeholders which fed directly into the strategy design process and the integrated SA process. The use of causal chains and stakeholder engagement focused around a 'carousel' exercise of commenting on the draft causal chains in groups provided a rich opportunity space for discussion, commentary and annotation on the diagrams. This resulted in a highly conducive environment for knowledge exchange.

5.5.4. Barriers to success for knowledge brokerage

Any form of stakeholder engagement depends upon the representativeness of the stakeholders present in the workshop. In this case a good cross-section of the interests was represented, but this requires effectively stakeholder mapping in the first place. The nature of the workshop, however, was expert-based and consultation with the public was limited to the usual formal opportunities associated with SA (scoping and the draft plan/strategy). Only a moderate range of stakeholders could therefore be considered to have been engaged during the process. Causal chains need to be clearly presented as *draft* with the expectation that they will be modified by the workshop. An alternative, given sufficient time, is to generate the causal chains with the stakeholders from scratch in the workshop.

5.5.5. Lessons learned

This case particularly highlights the importance of focused engagement approaches with stakeholders who may not traditionally engage in strategic planning processes and the need to create active opportunities for stakeholders to engage, debate and exchange knowledge within the workshop.

5.6. Case Study 6—SA of the UK Government's draft Planning Policy Statement on Eco-towns and Eco-towns Programme

5.6.1. The story background

The draft Eco-towns Planning Policy Statement (PPS) published in November 2008 for consultation set out what the UK Government considered "the UK's toughest ever green standards for new development", including achieving 'zero carbon' status across all the buildings in the eco-town and allocating 40% of the area within the town to be green space. The draft PPS also pledged that individual eco-towns will need to submit planning applications in the same way as any other major development proposal. A Sustainability Appraisal on the draft PPS and for each short-listed location were also published.

The Government's stated objective for eco-towns was:

> "First, the need for a major increase in housing supply to meet rapidly rising housing need and improve affordability, and second, the challenge of redesigning the way we live so as to respond more effectively to climate change and greater sustainability challenges."
> (Box 2: Rationale for the alternatives considered, p. 22, SA and HRA of the Draft Eco-towns Planning Policy Statement) (CLG, 2008a).

However, the Government is already able to increase housing supply by increasing the housing number set for Regional Spatial Strategies and on the second objective, there is a wide range of potential alternative approaches to improving the environmental performance of housing other than an eco-towns approach (Sheate, 2008).

5.6.2. Techniques used

Sustainability Appraisal (SA, incorporating SEA) was applied to the draft Eco-towns Planning Policy Statement and to the Eco-towns Programme (the short-list of potential locations in England). A consultation exercise in April 2008 (CLG, 2008b) sought views from the public and interested parties on a preliminary short-list of 15 potential sites to go forward for further study, following an early call from the Government for developers to come forward with proposals for possible locations for eco-towns in July 2007 (CLG, 2007). Within the SA of the Eco-towns Programme GIS was used to show some of the key constraint factors at each location, although it was not used to show the constraint factors for the whole programme (all locations) across England.

5.6.3. Success factors for knowledge brokerage

A major debate ensued as a result of this policy initiative, including the creation of a number of local campaign groups against individual eco-town locations as well as the principle of such settlements, websites, online fora and judicial reviews concerned about the implications of the proposed eco-towns on their local environment and economy. The SA process was severely criticised by campaigns groups and prominent celebrities and experts:-

> "I think eco-towns are one of the biggest mistakes the government can make. They are in no way environmentally sustainable." Lord (Richard) Rogers, Government advisor on architecture, *Sunday Times*, 15 June 2008

As a means of generating debate and knowledge exchange the policy initiative and the SA process may be considered to have had a degree of success. Certainly a highly diverse range of stakeholders were engaged. However, much of the debate has been adversarial and not conducive to participative engagement and mutual understanding.

5.6.4. Barriers to success for knowledge brokerage

A key barrier to success has been the failure to address "reasonable alternatives" in the SEA process, only business as usual and the draft PPS (Sheate, 2008). The SEA consequently missed the opportunity to generate real debate around, and evaluate, a much wider range of alternative policy options that could have delivered greater environmental benefits more quickly and with more widespread public and stakeholder support. This restricted the opportunity space for knowledge brokerage and reflected the limited willingness of the proponent to make use of other knowledge, even while being (apparently) moderately open to other inputs.

There was an inconsistent approach from scoping to the assessment stage, with different consultants undertaking the two stages, and a severely constrained timescale meant that the whole process was rushed as well as being a departure from the usual strategic planning process. Some developers have since pulled out of the process:

> "It is clear that sustainable development in Marston Vale will be best achieved through the plan-led system……..We want to be free to develop our plans with the community without the time constraint of the current eco-town process…..and we will continue to ensure that meaningful dialogue is held with local residents and stakeholders" David Reavell, Director O&H Properties, quoted in *Planning* 6 February 2009.

There was also a simple failure to use GIS strategically, in a way that would have helped facilitate knowledge transfer and exchange, which would have enabled stakeholders to understand the relative impacts of the different possible locations, and which should have been regarded as alternatives to each other in the short-listing process (Sheate, 2008).

5.6.5. Lessons learned

Effective knowledge brokerage needs time—rushed timescales cannot deliver effective plans or strategic assessments and militate against effective engagement. Timescales driven by strong political pressure are therefore likely to experience legitimacy and public trust problems. Strategic assessments need to show strategic thinking and therefore consider a proper range of "reasonable alternatives", which would also help in applying techniques appropriately to the issues in hand, e.g. use of GIS. It was not that GIS was not used, it was that it was used selectively on single locations rather than to inform the whole programme assessment. Overall, the environment was not one that was conducive to knowledge exchange and transfer.

6. Discussion

Table 1 below summarizes the essence of the six cases with respect to context and techniques for knowledge brokerage. It outlines the fundamental elements that, even though adopted for reasons unrelated to knowledge brokerage purposes, can now be seen as playing a fundamental role towards that purpose.

From the case studies described above it is clear that strategic approaches provide three main mechanisms through which knowledge brokerage can be promoted:-

- Processes: in the form of SEA, SA, LSS, create opportunities for iteration and engagement with diverse stakeholders;
- Fora: provide the means of bringing together stakeholders that represent different types of knowledge to exchange and transfer knowledge; and
- Techniques provide the platforms through which knowledge exchange and transfer can be facilitated.

An important question arises from the case studies as to the extent to which strategic approaches are actually being used proactively to enable or facilitate knowledge brokerage, or whether knowledge brokerage, where it occurs, is somewhat incidental. Given the relative newness of the knowledge brokerage concept in policy circles and, from the authors' experience with the case studies described, it seems unlikely that knowledge brokerage features strongly in current applications of many strategic approaches used in environmental and sustainability decision-making. Where it happens, therefore, it is largely serendipitous rather than designed. Table 2 provides an initial evaluation of the case studies against the preliminary knowledge brokerage criteria outlined in the methodology. It is clear from this analysis that strategic approaches and assessment techniques tend towards moderate to good ranges of stakeholders engaged and in terms of opportunities for that engagement and potential to share and exchange knowledge. Where a number of the case studies did less well is in the creation of an environment conducive for knowledge exchange and willingness (openness of process) to make use of the different types of knowledge made available through the assessment processes. Just because a diverse range of stakeholders were engaged does not mean that the process was conducive to knowledge brokerage.

However, positive benefits for knowledge brokerage can be seen to arise through the use of certain techniques in strategic approaches and, indeed, problems and barriers can be recognised as a result of poor application or use of certain techniques. Both the positive and negative experiences provide useful lessons for explicitly designing knowledge brokerage into strategic approaches, which can build on the inherent nature of the approaches and techniques used, but which can give those approaches a wider value to the community and the subject area than just the delivery of their intended (assessment) objectives.

To what extent can the techniques used in SEA/SA help to reconcile competing knowledge claims by different stakeholders? Ultimately they may not necessarily reconcile competing claims, but the use of appropriate techniques may help to bring them to the fore and increase the awareness of stakeholders that competing claims even exist.

Albeit not easy to demonstrate empirically, it can be argued that often breakdowns in decision processes result from tensions that are generated by different, if not opposing, perspectives on how a certain situation, or problem, should be addressed. Often however, these different perspectives are merely 'virtual' and it turns out that opponents actually mean the same thing, but express their views and wishes with different concepts, wording or terminologies. These are tensions that could be managed through appropriate knowledge brokerage to facilitate dialogues, close knowledge gaps and encourage convergent analysis, breaking through the divergent engagement processes.

The techniques used in SEA/SA clearly need to be employed sufficiently early and given sufficient time to facilitate a more collaborative space for knowledge brokerage. The lesson from the case studies examined is that knowledge brokerage is difficult under conditions where processes are rushed, given insufficient resources or where the proponent is simply not willing to make use of other forms of knowledge because of a previously fixed policy position (even if apparently engaging widely). The motivation of the proponent is therefore critical for the extent to which SEA/SA techniques can ultimately deliver knowledge brokerage.

A number of key learning points emerge that need to be placed at the forefront of designing and applying strategic approaches in the future if they are to maximize the opportunities genuinely to provide platforms for knowledge brokerage:

1. Identify the potential added value to the policy and strategic approach process of improved knowledge brokerage, assuring the distinction between information and knowledge.
2. Map social networks and different types of stakeholders, knowledge basis and information needs to adjust knowledge brokerage.
3. As part of stakeholder and user engagement mapping, identify the potential types of knowledge and knowledge ownership of stakeholders, given the policy issues under consideration.
4. Develop an environment of trust and openness towards proponent's receptiveness of substantial inputs into decision-making.

Table 1
Summary of processes, engagement mechanisms and techniques used in the six case studies.

	Loulé municipal sustainability strategy (PT)	National Strategy for Integrated Coastal Zone Management (PT)	Electricity Transport Network Development and Investment Plan (PT)	Deer Commission for Scotland Strategy for Wild Deer (UK/Scotland)	Greater London Authority's Water Strategy (UK)	Planning Policy Statement on Eco-towns and Eco-towns Programme (UK/England)
Processes	LSS (Local sustainability strategies)	SEA	SEA	SEA	Integrated SA (incl. HIA)	SA
Fora	Multistakeholders Elected representatives Business	Multistakeholders Consultation Sectoral authorities steering group	Investment proponents and sectoral stakeholders Environmental authorities, NGOs and citizen consultation Regional authorities	Steering Group; Advisory Group; Public Consultation	Steering Group; Health Stakeholder Workshop; London Assembly consultation	National consultation process; 'Roadshows' exhibition/public events.
Techniques utilised	Evidence-based and science-based interdisciplinary team Futures thinking Internet platforms Interviews Strategic diagnosis and SWOT Link to planning	Strategic diagnosis and SWOT Futures thinking Strategic options discussion Trust development Mapping risks and opportunities Link to policy-making	GIS mapping Regional workshops Strategic options discussion Trust development Mapping risks and opportunities Link to planning	Futures thinking; causal chain/network analysis Facilitated stakeholder engagement	Facilitated stakeholder engagement/ Workshop; causal chains/network analysis	Local level GIS mapping; local workshops; Public consultation/ participation

5. Design stakeholder engagement and the employment of strategic techniques explicitly with the intention to help facilitate knowledge exchange and transfer among stakeholders, recognising the diversity of types of knowledge represented by different stakeholders.
6. Use knowledge exchanged to inform the assessment process, create innovation and evidence-based solutions, to which the link between strategic assessment and the decision process becomes crucial.
7. Build on the capacity and knowledge exchange achieved to inform future processes and link it up to monitoring and follow-up.
8. Recognise the importance of process openness, process iteration and flexibility to enhance strategic thinking and adaptive management.
9. Provide sufficient time and resources to enable knowledge brokerage to take place effectively.

7. Conclusions

From the points above, and the evidence from the cases presented, three main conclusions can be outlined. Firstly, that the potential of strategic approaches, and respective techniques, for knowledge brokerage, is evident from the case studies discussed. It is worth saying that these cases are not necessarily typical of SEA/SA practice, and therefore the kinds of techniques used are not necessarily always included in traditional SEA/SA practice. In the current cases the techniques have been used perhaps quite incidentally rather than having knowledge brokerage in mind, but if we are conscious of their role then we can do better to enhance this potential. To make use of these tools and techniques for knowledge brokerage we would need to make sure that strategic approaches incorporate more stakeholder mapping, communicative practices and stakeholder dialogues.

Secondly, that knowledge brokerage has the potential to help build capacity among stakeholders in strategic assessment and decision-making; and so strategic approaches need explicitly to design in knowledge brokerage opportunities as a means of helping to deliver better capacity building. This is not just a matter of decision-makers or stakeholders learning from the process of SEA/SA, but of actively

Table 2
Evaluation of case studies against preliminary knowledge brokerage criteria.

Knowledge brokerage preliminary criteria	Case studies					
	Loulé municipal sustainability strategy (PT)	National Strategy or Integrated Coastal Zone Management (PT)	Electricity Transport Network Development & Investment Plan (PT)	Deer Commission for Scotland Strategy for Wild Deer (UK/ Scotland)	Greater London Authority's Water Strategy (UK)	Planning Policy Statement on Eco-towns & Eco-towns Programme (UK/England)
Range of stakeholders (diverse, moderate, low)	Diverse	Low	Diverse	Moderate	Moderate	Diverse
'Opportunity space' (good, moderate, poor)	Good	Good	Good	Good	Good	Moderate
Receptiveness of proponent to substantial input into decision- making (high, medium, low)	High	High	High	High	High	Medium
Conducive to knowledge exchange (good, moderate, poor)	Good	Moderate	Good	Moderate	Good	Poor
Willingness to make use of different types of knowledge (high, medium, low)	Medium	Low	Medium	Medium	High	Low

Green: High/good/diverse.
Yellow: Medium/moderate.
Red: Low/poor.

facilitating the exchange and transfer of knowledge already owned by stakeholders.

Finally, the experiences described in this paper show how the value of SEA/SA can be improved with respect to their social and communicative capacity. Too often SEA/SA techniques are seen as instruments for technical analysis and producers of information. This initial analysis shows that there is a strong potential in SEA/SA to operate as facilitators of processes and mutual learning and sharing, where knowledge brokerage can be one obvious purpose. This is particularly relevant the higher the level of decision-making and the more strategic the planning process. But the next challenge, which we are currently addressing, is to develop and apply through action-oriented research, the incorporation of formative evaluation throughout the process, using elaborated criteria for evaluating more systematically and extensively strategic approaches and assessment techniques for their knowledge brokerage potential. This should include who or what act as knowledge brokers (e.g. a single person, the assessment team, the assessment techniques etc.) and which approaches and techniques work best for brokering which types of knowledge.

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